

three-semester-hour mathematics proficiency. A minimum grade of "C" (2.00) is required in all course work in the major or related fields. Required courses are as follows:

BIO 187 General Biology I <i>SG</i>	4
BIO 188 General Biology II <i>SQ</i>	4
BIO 311 Biology and Society	3
BIO 314 Research Colloquium in Biology and Society I <i>L*</i>	2
BIO 320 Fundamentals of Ecology	3
or BIO 345 Organic Evolution (3)	
BIO 340 General Genetics.....	4
or BIO 341 Genetic Analysis (5)	
BIO 414 Research Colloquium in Biology and Society II* <i>L</i>	1
BIO 493 Honors Thesis <i>L</i>	3
or BIO 495 Undergraduate Thesis (3)	
or BIO 499 Individualized Instruction (3)	
or approved hours in research (3)	
MAT 251 Calculus for Life Sciences <i>MA</i>	3
or MAT 210 Brief Calculus <i>MA</i> (3)	
or any other calculus	
Total	27

* Both BIO 314 and 414 must be taken to secure L credit.

The remaining courses to complete the major are determined by the student in consultation with an advisor and must be distributed in the following areas:

- 10 hours of upper-division electives from BIO, MIC, PLB;
- 12 hours of upper-division interface courses from an approved list. At least three semester hours in each of these areas: ethics, history and philosophy of science, and contemporary societal issues;
- 11 hours of physical sciences (CHM recommended); and
- three to four hours of an approved course in statistics.

CLINICAL LABORATORY SCIENCES—B.S.

The Clinical Laboratory Sciences degree program prepares individuals to practice in the field of clinical laboratory sciences, which includes the major disciplines of clinical chemistry, hematology, immunohematology, immunology, and microbiology. Employment opportunities exist in hospital, private, physician, and research laboratories and in government, sales, management, and education. After obtaining a B.S. degree in Clinical Laboratory Sciences, the graduate is eligible for national certification by examination.

A major in Clinical laboratory Sciences consists of 40 semester hours in clinical laboratory sciences courses. A minimum grade of "C" (2.00) is required in all course work in the major or related fields. Also required are the following courses:

BCH 361 Principles of Biochemistry.....	3
BIO 360 Animal Physiology.....	3
CHM 113 General Chemistry <i>SQ</i>	4
CHM 231 Elementary Organic Chemistry <i>SQ</i> ¹	3
MIC 205 Microbiology <i>SG</i> ²	3
or MIC 220 Biology of Microorganisms (3)	

MIC 206 Microbiology Laboratory <i>SG</i> ²	1
Total	17

- ¹ Both CHM 231 and 235 must be taken to secure SQ credit.
- ² Both MIC 205 and 206 must be taken to secure SG credit.

Equivalent courses may be substituted upon approval of an advisor. Students must consult with the clinical laboratory sciences advisor to select general electives courses. Completion of the degree is dependent upon acceptance of the student into the accredited professional study program, which consists of 40 hours of clinical laboratory sciences courses. The university does not guarantee all students to be accepted into the professional study program due to space limitations at the clinical affiliates and restrictions of program accreditation. For more information on acceptance procedures and program standards, contact the school for a program brochure. For proper course planning, students must meet with a clinical laboratory sciences advisor.

CONSERVATION BIOLOGY—B.S.

The major in Conservation Biology consists of a minimum of 41 semester hours in the required major courses and a minimum of 16 hours in related fields, plus a three-semester-hour calculus course and a three-semester-hour statistics course. A minimum grade of "C" (2.00) is required for all course work in the major and related fields. Required courses are as follows:

BIO 187 General Biology I <i>SG</i>	4
BIO 188 General Biology II <i>SQ</i>	4
BIO 317 Conservation Biology	3
BIO 320 Fundamentals of Ecology	3
BIO 340 General Genetics.....	4
or BIO 341 Genetic Analysis (5)	
BIO 360 Animal Physiology.....	3
BIO 410 Techniques in Wildlife Conservation Biology <i>L</i>	3
BIO 411 Advanced Conservation Biology I.....	3
BIO 412 Advanced Conservation Biology II.....	3
Total	30 or 31

The remaining hours to bring the total to 41 are selected from among relevant upper-division courses in BIO and PLB courses or in related departments, in consultation with an advisor. Required courses in related fields plus math proficiency are as follows:

CHM 113 General Chemistry <i>SQ</i>	4
CHM 115 General Chemistry with Qualitative Analysis <i>SQ</i>	5
Choose between the combinations of organic chemistry courses below	4 or 8
CHM 231 Elementary Organic Chemistry <i>SQ</i> * (3)	
CHM 235 Elementary Organic Chemistry Laboratory <i>SQ</i> * (1)	
or	
CHM 331 General Organic Chemistry (3)	
CHM 332 General Organic Chemistry (3)	
CHM 335 General Organic Chemistry Laboratory (1)	
CHM 336 General Organic Chemistry Laboratory (1)	

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

MAT 251	Calculus for Life Sciences <i>MA</i>	3
	or MAT 210 Brief Calculus <i>MA</i> (3)	
	or any other calculus	
STP 226	Elements of Statistics <i>CS</i>	3
	or STP 294 ST: Statistics for Biosciences (3)	
Total	19 or 23

* Both CHM 231 and 235 must be taken to secure SQ credit.

MICROBIOLOGY—B.S.

The B.S. degree in Microbiology consists of a minimum of 41 semester hours in microbiology and 17 hours in approved related fields. A minimum grade of "C" (2.00) is required for all course work in the major and related fields. Required courses are as follows:

BIO 187	General Biology I <i>SG</i>	4
BIO 188	General Biology II <i>SQ</i>	4
BIO 340	General Genetics	4
Choose between the course combinations below		
BCH 361	Principles of Biochemistry (3)	
BCH 367	Elementary Biochemistry Laboratory (1)	
CHM 231	Elementary Organic Chemistry <i>SQ</i> ¹ (3)	
CHM 235	Elementary Organic Chemistry Laboratory <i>SQ</i> ¹ (1)	
or		
CHM 331	General Organic Chemistry (3)	
CHM 332	General Organic Chemistry (3)	
CHM 335	General Organic Chemistry Laboratory (1)	
CHM 336	General Organic Chemistry Laboratory (1)	
MIC 206	Microbiology Laboratory <i>SG</i> ²	1
MIC 220	Biology of Microorganisms	3
MIC 302	Advanced Bacteriology Laboratory <i>L</i> ³	2
MIC 360	Bacterial Physiology	3
MIC 401	Research Paper <i>L</i> ³	1
Total	30

¹ Both CHM 231 and 235 must be taken to secure SQ credit.

² Both MIC 205 and 206 must be taken to secure SG credit.

³ Both MIC 302 and 401 must be taken to secure L credit.

A minimum of 11 semester hours of upper-division electives in microbiology or approved life science fields must be taken. These elective hours must include two courses chosen from the following:

MIC 421	Experimental Immunology	2
MIC 442	Bacterial Genetics Laboratory	1
MIC 446	Techniques in Molecular Biology/Genetics Lab	2
MIC 470	Bacterial Diversity and Systematics	4
MIC 484	Internship	3
MIC 494	ST: Clinical Bacteriology Laboratory	3
MIC 495	Undergraduate Research	2

In addition, students are required to fulfill the university mathematical studies requirements with MAT 210 (or 251, 270, 290, or 294) as their MA course and BIO 406 (or any CSE course that meets the CS requirement). The required supplemental courses are as follows:

CHM 113	General Chemistry <i>SQ</i>	4
CHM 115	General Chemistry with Qualitative Analysis <i>SQ</i>	5
PHY 111	General Physics <i>SQ</i> *	3
PHY 112	General Physics <i>SQ</i> *	3
PHY 113	General Physics Laboratory <i>SQ</i> *	1

PHY 114	General Physics Laboratory <i>SQ</i> *	1
Total	17

* Both PHY 111 and 113 or PHY 112 and 114 must be taken to secure SQ credit.

MOLECULAR BIOSCIENCES AND BIOTECHNOLOGY—B.S.

The B.S. degree in Molecular Biosciences and Biotechnology is designed to prepare students for productive careers in rapidly expanding areas within the life sciences, such as biotechnology, medicine, and biomedical research or any area of biology at the molecular and cellular level. Courses and faculty are drawn primarily from the School of Life Sciences and the Department of Chemistry and Biochemistry.

The major in Molecular Biosciences and Biotechnology consists of a minimum of 59 semester hours of course work plus two courses in mathematics specifically designed for this program. A minimum grade of "C" (2.00) is required for all course work in major. The required major courses (22 total semester hours) are as follows:

BIO 340	General Genetics	4
MBB 245	Cellular and Molecular Biology <i>SQ</i>	3
MBB 246	Cellular and Molecular Biology Laboratory <i>SQ</i>	1
MBB 247	Applied Biosciences: Biotechnology	3
MBB 248	Applied Biosciences: Biotechnology Laboratory	1
MBB 343	Genetic Engineering and Society <i>L</i>	4
MBB 484	Internship	6
	or MBB 499 Individualized Instruction (6)	
MBB 490	Capstone: Issues in Biotechnology <i>L</i>	4
MIC 206	Microbiology Laboratory <i>SG</i> *	1
MIC 220	Biology of Microorganisms	3
Total	30

* Both MIC 205 and 206 must be taken for SG credit.

Choose at least one of the following courses (or combinations) for a minimum of one to five semester hours. Although only one advanced lab course is required, students are encouraged to take two:

BIO 451	Cell Biotechnology Laboratory	3
MBB 350	Applied Genetics	4
MBB 445	Techniques in Molecular Biology/Genetics	2
MBB 446	Techniques in Molecular Biology/Genetics Lab ¹	2
MIC 420	Immunology: Molecular and Cellular Foundations	3
MIC 421	Experimental Immunology ²	2
MIC 442	Bacterial Genetics Laboratory	1

¹ MBB 446 is taken with MBB 445.

² MIC 421 is taken with MIC 420.

Required supplemental courses in biology, chemistry, mathematics and physics (28 total semester hours) are as follows (a minimum grade of "C" (2.00) is required for all course work):

BCH 361	Principles of Biochemistry	3
BCH 367	Elementary Biochemistry Laboratory	1
CHM 113	General Chemistry <i>SQ</i>	4
CHM 115	General Chemistry with Qualitative Analysis <i>SQ</i>	5
Choose between the organic chemistry course combinations below		
		4 or 8

CHM 231 Elementary Organic Chemistry SQ ¹ (3)	
CHM 235 Elementary Organic Chemistry Laboratory SQ ¹ (1)	
— or —	
CHM 331 General Organic Chemistry (3)	
CHM 332 General Organic Chemistry (3)	
CHM 335 General Organic Chemistry Laboratory (1)	
CHM 336 General Organic Chemistry Laboratory (1)	
MAT 251 Calculus for Life Sciences MA	3
PHY 111 General Physics SQ ²	3
PHY 112 General Physics SQ ³	3
PHY 113 General Physics Laboratory SQ ²	1
PHY 114 General Physics Laboratory SQ ³	1
Total	28–32

- ¹ Both CHM 231 and 235 must be taken to secure SQ credit.
² Both PHY 111 and 113 must be taken to secure SQ credit.
³ Both PHY 112 and 114 must be taken to secure SQ credit.

Satisfaction of the university computer/statistics/quantitative applications requirement is met with MAT 351 Mathematical Methods for Genetic Analysis (3), in which a minimum grade of “C” (2.00) is required.

Additional courses are available in the life or physical sciences for elective credit.

PLANT BIOLOGY—B.S.

The School of Life Sciences offers three options to meet the needs of students whose interests are in the rapidly expanding areas within plant biology. Students may choose the general program option which allows the opportunity to develop strength in one area or discipline. Others may choose to design a more specific, but interdisciplinary, program in one of the following two optional concentrations: environmental science and ecology; plant biochemistry and molecular biology.

Each concentration promotes interaction between diverse groups and captures the growing interdisciplinary nature of scientific investigations. When one of these options is chosen, the title will appear on transcripts and other university documents.

The three curricular options prepare students for careers in technical, industrial, and educational fields as well as professional degree programs in medicine or research and post-graduate education in the life sciences.

General Program

The B.S. degree in Plant Biology consists of a minimum of 38 semester hours in plant biology and approved life science and physical science courses. A minimum grade of “C” (2.00) is required for all course work in the major and related fields. Required courses are as follows:

BIO 320 Fundamentals of Ecology	3
or BIO 340 General Genetics (4)	
BIO 353 Cell Biology	3
PLB 200 Biology of Plants SQ*	3
PLB 201 Biology of Plants Laboratory SQ*	1
PLB 306 Plant Anatomy	4
PLB 308 Plant Physiology	4

PLB 484 Internship	3
or PLB 499 Individualized Instruction (3)	
Total	21–22

* Both PLB 200 and 201 must be taken to secure SQ credit.

The remaining hours to bring the total to 38 are selected from among relevant courses in plant biology, other life sciences, and physical sciences.

Required supplemental courses in chemistry and mathematics are as follows (a minimum grade of “C” [2.00] is required for all course work):

CHM 113 General Chemistry SQ	4
CHM 115 General Chemistry with Qualitative Analysis SQ	5
Choose between the organic chemistry course combinations below	4 or 8
CHM 231 Elementary Organic Chemistry SQ* (3)	
CHM 235 Elementary Organic Chemistry Laboratory SQ* (1)	
— or —	
CHM 331 General Organic Chemistry (3)	
CHM 332 General Organic Chemistry (3)	
CHM 335 General Organic Chemistry Laboratory (1)	
CHM 336 General Organic Chemistry Laboratory (1)	
MAT 251 Calculus for Life Sciences MA	3
Total	16 or 20

* Both CHM 231 and 235 must be taken to secure SQ credit.

One of the following courses is also required:

PLB 430 Statistical Analyses in Environmental Science CS	3
or PLB 432 Computer Applications in Biology CS (3)	
or BIO 415 Biometry CS (4)	

Special Concentration Programs

Two special concentration programs are optional. Students who wish to pursue the general program in Plant Biology are not obligated to choose one of these specific programs. Each special concentration program is expected to be interdisciplinary and contain course work outside both Plant Biology and the College of Liberal Arts and Sciences. Each concentration includes hands-on technical training.

Environmental Science and Ecology. The B.S. degree in Plant Biology with a concentration in environmental science and ecology consists of a minimum of 44 semester hours in plant biology and approved life science and physical science courses. A minimum grade of “C” (2.00) is required for all course work in the major and related fields. Required courses are as follows:

BIO 320 Fundamentals of Ecology	3
Choose between the geology course combinations below	4
GLG 101 Introduction to Geology I (Physical) SQ, G ¹ (3)	
GLG 103 Introduction to Geology I—Laboratory SQ ¹ (1)	
— or —	
GLG 110 Geologic Disasters and the Environment SG, G ² (3)	
GLG 111 Geologic Disasters Laboratory SG ² (1)	
— or —	
GPH 111 Introduction to Physical Geology SQ (4)	

L literacy and critical inquiry / MA mathematics / CS computer/statistics/quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See “General Studies,” page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

PLB 200	Biology of Plants <i>SQ</i> ³	3
PLB 201	Biology of Plants Laboratory <i>SQ</i> ³	1
PLB 310	The Flora of Arizona	4
PLB 322	Environmental Science (Major)	3
PLB 420	Plant Ecology: Organisms and Populations	3
	or PLB 421 Plant Ecology: Communities and Ecosystems (3)	
PLB 484	Internship	3
	or PLB 499 Individualized Instruction (3)	
Total		24

- ¹ Both GLG 101 and 103 must be taken to secure SQ credit.
² Both GLG 110 and 111 must be taken to secure SG credit.
³ Both PLB 200 and 201 must be taken to secure SQ credit.

The remaining hours to bring the total to 44 are selected from among relevant courses in plant biology, other life sciences, and physical sciences.

CHM 113	General Chemistry <i>SQ</i>	4
CHM 115	General Chemistry with Qualitative Analysis <i>SQ</i>	5
CHM 231	Elementary Organic Chemistry <i>SQ</i> *	3
CHM 235	Elementary Organic Chemistry Laboratory <i>SQ</i> *	1
MAT 251	Calculus for Life Sciences <i>MA</i>	3
Total		16

- * Both CHM 231 and 235 must be taken to secure SQ credit.

One of the following courses is also required:

PLB 430	Statistical Analyses in Environmental Science <i>CS</i>	3
	or PLB 432 Computer Applications in Biology <i>CS</i> (3)	
	or BIO 415 Biometry <i>CS</i> (4)	
	or STP 420 Introductory Applied Statistics <i>CS</i> (3)	

Plant Biochemistry and Molecular Biology. The B.S. degree in Plant Biology with a concentration in biochemistry and molecular biology consists of 56 semester hours. A minimum grade of "C" (2.00) is required for all course work in the major and related fields.

The required major courses are as follows:

BIO 353	Cell Biology	3
MBB 245	Cellular and Molecular Biology <i>SQ</i> *	3
MBB 246	Cellular and Molecular Biology Laboratory <i>SQ</i> *	1
PLB 308	Plant Physiology	4
PLB 350	Applied Genetics	4
PLB 444	Plant Growth and Development	3
PLB 484	Internship	3
	or PLB 499 Individualized Instruction (3)	
Total		21

- * Both MBB 245 and 246 must be taken to secure SQ credit.

Required supplemental courses in biochemistry, chemistry, mathematics, and physics are as follows (a minimum grade of "C" (2.00) is required for all course work):

Choose between the course combinations below 4 or 9

BCH 361	Principles of Biochemistry (3)
BCH 367	Elementary Biochemistry Laboratory (1)

— or —

BCH 461	General Biochemistry (3)	
BCH 462	General Biochemistry (3)	
BCH 467	Analytical Biochemistry Laboratory <i>L</i> (3)	
CHM 113	General Chemistry <i>SQ</i>	4
CHM 115	General Chemistry with Qualitative Analysis <i>SQ</i>	5
CHM 231	Elementary Organic Chemistry <i>SQ</i> ¹	3

CHM 235	Elementary Organic Chemistry Laboratory <i>SQ</i> ¹	1
MAT 251	Calculus for Life Sciences <i>MA</i>	3
PHY 111	General Physics <i>SQ</i> ²	3
PHY 112	General Physics <i>SQ</i> ³	3
PHY 113	General Physics Laboratory <i>SQ</i> ²	1
PHY 114	General Physics Laboratory <i>SQ</i> ³	1
Total		28 or 33

- ¹ Both CHM 231 and 235 must be taken to secure SQ credit.
² Both PHY 111 and 113 must be taken to secure SQ credit.
³ Both PHY 112 and 114 must be taken to secure SQ credit.

The remaining hours to bring the total to 56 are selected from among relevant courses in plant biology, other life sciences, and physical sciences.

One of the following courses is also required:

BIO 406	Computer Applications in Biology <i>CS</i>	3
	or MAT 351 Mathematical Methods for Genetic Analysis <i>CS</i> (3)	

CERTIFICATE IN HISTORY AND PHILOSOPHY OF SCIENCE

The School of Life Science offers an undergraduate History and Philosophy of Science Certificate. The certificate program is designed to give students an understanding of both traditional philosophic issues surrounding science and the historical development of concrete scientific theories and ideas. The philosophic questions, of the belief-worthiness and interpretation of scientific claims as well as norms within or about science, both enrich and are enriched by their combination with historical study. Such philosophic and historical study will also often include the examination of contemporary sciences and their place within the larger society.

The certificate requires 18 semester hours bearing a HPS or PHI prefix of which 12 semester hours must be upper-division. Included with the 18 semester hours, at least nine must bear the HPS prefix. HPS 314 or PHI 314 Philosophy of Science is also required. All courses counting toward the certificate must be approved for this purpose by a School of Life Sciences academic advisor and passed with a grade of "C" (2.00) or higher.

MINORS

Biology

The Biology minor consists of 24 semester hours, including BIO 187 General Biology I and BIO 188 General Biology II, and 16 hours selected with approval of an advisor; at least 12 hours must be in the upper division. Courses not available for credit in the life sciences majors (BIO, MBB, MIC, and PLB) cannot be used for the minors (e.g., BIO 100 The Living World and BIO 201 Human Anatomy and Physiology I). This minor is not available to students majoring in the life sciences.

Microbiology

The minor in Microbiology consists of a minimum of 24 semester hours. Required courses are as follows:

BIO 187	General Biology I <i>SG</i>	4
BIO 188	General Biology II <i>SG</i>	4
BIO 340	General Genetics	4

MIC 206 Microbiology Laboratory <i>SG</i> ¹	1
MIC 220 Biology of Microorganisms	3
MIC 302 Advanced Bacteriology Laboratory <i>L</i> ²	2
MIC 360 Bacterial Physiology	3
Total	21

¹ Both MIC 205 and 206 must be taken to secure *SG* credit.

² Both MIC 302 and 401 must be taken to secure *L* credit.

The remaining upper-division microbiology courses are chosen in consultation with an advisor. Students majoring in Biology may not minor in Microbiology.

Plant Biology

The minor can be designed after the curricular options offered. Variations to the minor for the plant biochemistry and molecular biology option are also listed below. Courses not available for credit for majors in the life sciences cannot be used for the minor. A Plant Biology minor is not available to students majoring in the life sciences.

The minor consists of a minimum of 24 semester hours. Required courses are as follows:

PLB 200 Biology of Plants <i>SQ</i> *	3
PLB 201 Biology of Plants Laboratory <i>SQ</i> *	1
PLB 306 Plant Anatomy	4
or PLB 308 Plant Physiology (4)	
or PLB 310 The Flora of Arizona (4)	
Total	8

* Both PLB 200 and 201 must be taken to secure *SQ* credit.

The remaining 16 hours are selected by the student through consultation with an academic advisor. Eight of these 16 hours must be in upper-division courses in the life sciences or other advisor-approved areas.

Plant Biochemistry and Molecular Biology Option

BIO 353 Cell Biology	3
or PLB 308 Plant Physiology (4)	
or PLB 350 Applied Genetics (4)	
MBB 245 Cellular and Molecular Biology <i>SQ</i> *	3
MBB 246 Cellular and Molecular Biology Laboratory <i>SQ</i> *	1
Total	7-8

* Both MBB 245 and 246 must be taken to secure *SQ* credit.

The remaining 16 to 17 hours are selected by the student through consultation with an academic advisor. Eight to nine of these 16 to 17 hours must be in upper-division courses in the life sciences or other advisor-approved areas.

B.I.S. CONCENTRATIONS

Concentrations in biology, history and philosophy of science, microbiology, molecular biosciences and technology, or plant biology are available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 123.

SECONDARY EDUCATION—B.A.E.

This degree is offered through the Initial Teacher Certification (ITC) program in the College of Education. Students pursuing a major in Secondary Education (Biological Sciences) have an advisor in the College of Education and an advisor within the School of Life Sciences.

See "College of Education," page 189, for information on admission eligibility requirements, admission deadlines, field experiences, and student teaching. For more information, or to schedule an appointment with an advisor, call the Office of Student Services in the College of Education at 480/965-5555.

Academic Specialization ITC Admission Requirements.

The following courses must be completed with a grade of "C" (2.00) or higher before applying to the ITC professional program:

BIO 187 General Biology I <i>SG</i>	4
BIO 188 General Biology II <i>SQ</i>	4

In addition, at least 12 hours of biology course work from the major teaching field may be in progress when applying to the ITC but must be completed before starting the program.

Biological Sciences. The major teaching field consists of a minimum of 39 semester hours, at least 22 hours in supporting courses, and six hours in teaching methods. A minimum grade of "C" (2.00) is required for all course work in the major and related fields. Required major courses are as follows:

BIO 187 General Biology I <i>SG</i>	4
BIO 188 General Biology II <i>SQ</i>	4
BIO 320 Fundamentals of Ecology	3
BIO 340 General Genetics	4
BIO 345 Organic Evolution	3
BIO 360 Animal Physiology	3
BIO 370 Vertebrate Zoology	4
or BIO 385 Comparative Invertebrate Zoology (4)	
or PLB 300 Comparative Plant Diversity <i>L/SG</i> (4)	
or PLB 310 The Flora of Arizona (4)	
MIC 205 Microbiology <i>SG</i>	3
or MIC 220 Biology of Microorganisms (3)	
MIC 206 Microbiology Laboratory <i>SG</i> ¹	1
PLB 308 Plant Physiology	4
Electives ²	6
Total	39

¹ Both MIC 205 and 206 must be taken to secure *SG* credit.

² Should be selected from BIO, MIC, and PLB courses. BIO 100, 201, 202, 241, 300, and 319, or PLB 108 and 320 cannot be used to fulfill the elective requirement.

Required supporting courses are as follows:

BIO 316 History of Biology: Conflicts and Controversies <i>H</i>	3
or HPS 330 History of Biology: Conflicts and Controversies <i>H</i> (3)	
CHM 113 General Chemistry <i>SQ</i>	4

L literacy and critical inquiry / *MA* mathematics / *CS* computer/statistics/quantitative applications / *HU* humanities and fine arts / *SB* social and behavioral sciences / *SG* natural science—general/core courses / *SQ* natural science—quantitative / *C* cultural diversity in the United States / *G* global / *H* historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

CHM 115 General Chemistry with Qualitative Analysis <i>SQ</i>5 or CHM 116 General Chemistry <i>SQ</i> (4)	
GLG 102 Introduction to Geology II (Historical) <i>SG</i> , ¹ <i>H</i>3 or GLG 300 Geology of Arizona (3)	
MAT 170 Precalculus <i>MA</i>3	
PHY 101 Introduction to Physics <i>SQ</i>4 or PHY 111, 112 General Physics <i>SQ</i> ² (6) and PHY 113, 114 General Physics Laboratory <i>SQ</i> ² (2)	
Minimum total	22

¹ Both GLG 102 and 104 must be taken to secure SG credit.

² Both PHY 111 and 113 or PHY 112 and 114 must be taken to secure SQ credit.

Teaching Methods

BIO 480 Methods of Teaching Biology.....3	
BIO 482 Advanced Methods of Teaching Biology.....3	
Total	6

The minor teaching field consists of 24 semester hours as follows: BIO 187, 188; 16 additional hours in BIO, MIC, and PLB courses selected to reflect a balance across the disciplines and subdisciplines in biology. BIO 480 is required in addition to the 24 semester hours in biological sciences.

Graduate Programs

The School of Life Sciences offers programs leading to the degrees of Master of Natural Sciences, M.S., and Ph.D. See the *Graduate Catalog* for requirements. A combined B.S.-M.S. degree in Biology is also available.

MOLECULAR AND CELLULAR BIOLOGY

The school participates in the interdisciplinary program for the M.S. and Ph.D. degrees in Molecular and Cellular Biology as well.

The interdisciplinary M.S. and Ph.D. degrees with a major in Molecular and Cellular Biology are administered by the Interdisciplinary Committee on Molecular and Cellular Biology. The participating faculty are drawn primarily from the School of Life Sciences and the Department of Chemistry and Biochemistry, with additional faculty from the Departments of Anthropology and Physics and Astronomy.

For more information, contact the director or see the *Graduate Catalog*.

BIOLOGY (BIO)

BIO 100 The Living World. (4)

fall, spring, summer

Principles of biology. Cannot be used for major credit in the biological sciences. 3 hours lecture, 3 hours lab.

General Studies: SQ

BIO 187 General Biology I. (4)

fall, spring, summer

Biological concepts emphasizing principles and interplay of structure and function at the organismal, population, and community levels; includes ecology, evolution. Lecture, lab. Fee. Prerequisite: life science or health-related sciences major.

General Studies: SG

BIO 188 General Biology II. (4)

fall, spring, summer

Biological concepts emphasizing principles and interplay of structure and function at the molecular, cellular, and organismal levels; includes

genetics, cell biology, physiology. Lecture, lab. Fee. Prerequisite: BIO 187 recommended.

General Studies: SQ

BIO 193 The Nature of Biological Science. (4)

selected semesters

Creative and critical thinking skills in biological research; nature of biological knowledge; role of experimentation, predictions, hypotheses, theories, values. Lecture, lab, discussion. Fee. Prerequisite: high school biology.

General Studies: SQ

BIO 201 Human Anatomy and Physiology I. (4)

fall, spring, summer

Structure and dynamics of the human mechanism. Cannot be used for major credit in the biological sciences. 3 hours lecture, 3 hours lab. Fee.

General Studies: SG

BIO 202 Human Anatomy and Physiology II. (4)

fall, spring, summer

Continuation of BIO 201. Cannot be used for major credit in the biological sciences. 3 hours lecture, 3 hours lab. Fee. Prerequisite: BIO 201 or instructor approval.

BIO 241 Human Genetics. (4)

fall

Introduces basic concepts in genetics as they are applied to human heredity. Cannot be used for major credit in the biological sciences. 3 hours lecture, 3 hours lab. Prerequisite: a course in the life sciences.

General Studies: SG

BIO 300 Natural History of Arizona. (3)

selected semesters

Plant and animal communities of Arizona. Cannot be used for major credit in the biological sciences. Prerequisite: junior standing.

BIO 301 Field Natural History. (1)

selected semesters

Organisms and their natural environment. Cannot be used for major credit in the biological sciences. 2 weekend field trips, field project. Fee. Pre- or corequisite: BIO 300.

BIO 302 Cancer and Heart Disease. (3)

fall

Incidence and mortality statistics for cancer and heart disease; host and environmental risk factors; diagnosis, treatment and prevention strategies. Cannot be counted toward a Biology major. Prerequisites: a combination of CHM 231 (or its equivalent) and 12 hours in life sciences and a General Studies L course or only instructor approval.

General Studies: L

BIO 303 Radiation and Life. (3)

spring

Benefits and risks of radiation exposure in society; medical applications, food irradiation, nuclear power, solar UV, population health effects. Cannot be counted toward a Biology major. Prerequisites: a combination of CHM 231 (or its equivalent) and 12 hours in life sciences and a General Studies L course or only instructor approval.

General Studies: L

BIO 304 Radiation Medicine and Biology. (3)

fall

Uses of radiation in medicine, including CT, diagnostic x rays, MRI, nuclear medicine, ultrasound; biological effects of radiation with emphasis on cancer. Prerequisites: a combination of PHY 112 and 12 hours in life sciences and a General Studies L course or only instructor approval.

General Studies: L

BIO 310 Special Problems and Techniques. (1-3)

fall and spring

Qualified undergraduates may investigate a specific biological problem under the direction of a faculty member. May be repeated for a total of 6 semester hours. Prerequisites: formal conference with the instructor; approval of the problem by the instructor and department chair.

BIO 311 Biology and Society. (3)

fall

Explores interactions between biological sciences and society, e.g., biomedical, environmental, ethical, historical, legal, philosophical, political, and social issues. Lecture, discussion. Cross-listed as HPS

340. Credit is allowed for only BIO 311 or HPS 340. Prerequisites: both BIO 187 and 188 or only BIO 193 (or 100).

BIO 314 Research Colloquium in Biology and Society I. (2)

spring

Develops critical thinking abilities, research methods, and writing skills for research in the interactions between biological sciences and society. Lecture, discussion. Prerequisite: BIO 311 or instructor approval. *General Studies: L (if credit also earned in BIO 414)*

BIO 316 History of Biology: Conflicts and Controversies. (3)

selected semesters

Focuses on 19th and 20th centuries, considering biology as a discipline. Evolution, problems of heredity, development, and cell theory. Cross-listed as HPS 330. Credit is allowed for only BIO 316 or HPS 330.

General Studies: H

BIO 317 Conservation Biology. (3)

fall

Scientific and technical means for management, maintenance, protection, and restoration of biological resources on this planet. Prerequisite: 8 hours in biology.

BIO 318 History of Medicine. (3)

once a year

Scientific study of the human body, changing theories of disease, evolution of practical opinions on treatment, and the emerging institutionalization of medical practice. Cross-listed as HPS 331. Credit is allowed for only BIO 318 or HPS 331.

General Studies: H

BIO 319 Environmental Science (Nonmajor). (3)

fall

Environmental and biological concepts used to understand ecological systems with specific references to problems caused by humans. Cannot be used for major credit in the biological sciences. Cross-listed as PLB 320. Credit is allowed for only BIO 319 or PLB 320.

General Studies: G

BIO 320 Fundamentals of Ecology. (3)

fall and spring

Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics. Prerequisite: BIO 187 or instructor approval.

BIO 321 Introductory Ecology Laboratory. (3)

once a year

Laboratory and field observations and experiments to test current concepts and theories in ecology. Lab. Fee. Pre- or corequisite: BIO 320.

General Studies: L

BIO 331 Animal Behavior. (3)

fall

Evolutionary, genetic, physiological, and ecological bases of animal behavior. Prerequisite: BIO 187 (or its equivalent).

BIO 336 Sociobiology. (3)

selected semesters

Survey of animal and human social behavior examined from an evolutionary perspective. Suitable for nonmajors. Prerequisite: BIO 331 recommended.

BIO 340 General Genetics. (4)

fall, spring, summer

Science of heredity and variation. 3 hours lecture, 1 hour recitation. Prerequisite: BIO 187.

BIO 341 Genetic Analysis. (5)

selected semesters

General genetics: science of heredity and variation using critical inquiry. Not open to students with credit for BIO 340. 3 hours lecture, 6 hours lab. Prerequisites: BIO 187 and 193 (or their equivalents).

BIO 342 General Genetics Laboratory. (2)

fall

Explores general principles of inheritance with special reference to Mendelian, molecular, and computational genetics via laboratory experiments. Lab. Pre- or corequisite: BIO 340.

BIO 343 Genetic Engineering and Society. (4)

fall

Introduces genetic engineering, with emphasis on applications (gene therapy, DNA fingerprinting, bioremediation, transgenic animals and plants). 3 hours lecture, 3 hours lab. Cross-listed as MBB 343. Credit

is allowed for only BIO 343 or MBB 343. Fee. Prerequisites: preferably both MBB 245 and 246 or only BIO 188 (or its equivalent).

General Studies: L

BIO 344 Origins, Evolution, and Creation. (3)

selected semesters

Examines scientific, mythic, and religious ideas relating to origins (particularly human). Place of antievolutionism and "scientific creationism" in American culture. Lecture, discussion. Cross-listed as HPS 311/HUM 371/REL 383. Credit is allowed for only BIO 344 or HPS 311 or HUM 371 or REL 383.

BIO 345 Organic Evolution. (3)

spring

Processes of adaptive change and speciation in sexual populations. Prerequisite: BIO 187.

BIO 346 The Darwinian Revolution. (3)

selected semesters

Intellectual and cultural history of Darwinism and modern evolutionary theory and their impact on 19th- and 20th-century thought. Lecture, discussion. Cross-listed as HPS 332/HUM 372. Credit is allowed for only BIO 346 or HPS 332 or HUM 372.

BIO 351 Developmental Anatomy. (3)

fall

General developmental biology (embryology) and comparative structure of organ systems, illustrated mainly by vertebrate examples. Prerequisite: BIO 187.

BIO 352 Laboratory in Vertebrate Developmental Anatomy. (2)

fall

Morphology of representative embryonic and adult vertebrates. 2 3-hour labs. Fee. Prerequisites: BIO 187; BIO 351 recommended.

BIO 353 Cell Biology. (3)

fall, spring, summer

Survey of major topics in cell biology, including structural, biochemical, and molecular aspects of cell function. Prerequisite: BIO 187.

BIO 360 Animal Physiology. (3)

fall and spring

Physiological mechanisms of the higher vertebrates. Prerequisites: BIO 187; CHM 115; MAT 117.

BIO 361 Animal Physiology Laboratory. (2)

fall and spring

Experimental laboratory studies of physiological mechanisms in animals and model systems. Lab, recitation. Fee. Prerequisites: CHM 115; MAT 117. Pre- or corequisite: BIO 360.

BIO 370 Vertebrate Zoology. (4)

fall and spring

Characteristics, classification, evolution, and natural history of the major groups of vertebrate animals. 3 hours lecture, 3 hours lab. Fee. Prerequisite: BIO 187.

BIO 385 Comparative Invertebrate Zoology. (4)

fall

Characteristics, life cycles, adaptations, and evolution of invertebrate animals. 3 hours lecture, 3 hours lab. Fee. Prerequisite: BIO 187 or instructor approval.

BIO 386 General Entomology. (4)

selected semesters

Form, activities, and classification of insects. 3 hours lecture, 3 hours lab. Fee. Prerequisite: BIO 187.

BIO 390 Medical/Dental Field Placement. (3)

fall, spring, summer

Field placement for students exploring a career in a health profession. Requires classroom sessions and field work. Lecture, lab. Prerequisites: application; instructor approval.

BIO 394 Special Topics. (2–3)

selected semesters

Topics of current or special interest in one or more aspects of biology. Topics vary. Prerequisite: junior standing.

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

BIO 406 Computer Applications in Biology. (3)

fall

Computer analysis techniques in biology emphasizing data entry, management and analysis, and graphic portrayal. Employs mainframe and microcomputers. 2 hours lecture, 3 hours lab. Cross-listed as PLB 432. Credit is allowed for only BIO 406 or PLB 432. Fee. Prerequisites: both BIO 187 and MAT 117 (or 210) or only instructor approval. *General Studies: CS*

BIO 410 Techniques in Wildlife Conservation Biology. (3)

fall

Field and analytical techniques used in evaluating population structure, viability and environmental impacts. Lecture, lab. Fee. Prerequisites: both BIO 317 and 320 or only instructor approval. *General Studies: L*

BIO 411 Advanced Conservation Biology I. (3)

fall

Principles of conservation science, biology of threatened species, management principles that meet conservation goals, emphasizing North American ecosystems. Prerequisites: BIO 317, 320.

BIO 412 Advanced Conservation Biology II. (3)

spring

Global biodiversity patterns, processes, and conservation; global environmental change; sustainable use of natural resources; emphasizing international approaches to conservation biology. Prerequisites: BIO 317, 320.

BIO 414 Research Colloquium in Biology and Society II. (1)

spring

Further develops critical thinking abilities, research methods, and writing skills for research in the interactions between biological sciences and society. Lecture, discussion. Prerequisites: both BIO 311 and 314 or only instructor approval.

General Studies: L (if credit also earned in BIO 314)

BIO 415 Biometry. (4)

fall

Statistical methods applied to biological problems, design of experiments, estimation, significance, analysis of variance, regression, correlation, chi square, and bioassay; the use of computers. Does not satisfy laboratory requirements for the College of Liberal Arts and Sciences' General Studies program. 3 hours lecture, 3 hours lab. Fee. Prerequisite: MAT 210 (or its equivalent).

General Studies: CS

BIO 416 Professional Values in Science. (3)

once a year

Considers issues related to values in science such as collaboration, finances, legal issues, media, mentoring, ownership of ideas, scientific integrity. Discussion, student projects. Cross-listed as HPS 410. Credit is allowed for only BIO 416 or HPS 410.

General Studies: L

BIO 417 Experimental Design. (3)

spring

Fixed, random, mixed models; crossed and nested factorial designs; balanced and unbalanced data; completely randomized, blocked, repeated measure designs; ANCOVA. Prerequisite: BIO 415 (or its equivalent).

BIO 420 Field Zoology. (3)

selected semesters

Experience in zoological field techniques. Weekend or longer field trips. Prerequisite: instructor approval.

BIO 423 Population and Community Ecology. (3)

selected semesters

Organization and dynamics of population and communities, emphasizing animals. Theoretical and empirical approaches. Prerequisite: BIO 320 or instructor approval.

BIO 424 Mathematical Models in Ecology. (4)

selected semesters

Mathematical modeling of populations, communities, and ecosystems, including case studies and student-designed projects. 3 hours lecture, 3 hours lab. Prerequisites: BIO 320; a course in calculus.

BIO 425 Animal Ecology. (3)

selected semesters

Physiological and behavioral adaptations of individual animals to both abiotic and biotic environments. Prerequisite: BIO 320.

BIO 426 Limnology. (4)

selected semesters

Structure and function of aquatic ecosystems, with emphasis on freshwater lakes and streams. 3 hours lecture, 3 hours lab or field trip. Fee. Prerequisite: BIO 320 or instructor approval.

General Studies: L

BIO 427 Fire. (3)

spring in odd years

Interdisciplinary survey of fire on Earth—its history, ecology, and management. Prerequisite: BIO 187.

BIO 428 Biogeography. (3)

fall

Environmental and historical processes determining distributional patterns of animals and plants, emphasizing terrestrial life. Prerequisites: BIO 187 (or its equivalent); junior standing.

General Studies: L

BIO 431 Human Development and Fertility. (3)

selected semesters

Global influences of human population development on the human environment, including understanding human fertility and clinical influences on fertility. Discussion, presentation. Prerequisite: general biology.

BIO 435 Research Techniques in Animal Behavior. (3)

selected semesters

Experimental and field studies of animal behavior; description and quantification of animal behavior and interpretation of behavior within an evolutionary framework. 1 hour lecture, 6 hours lab. Prerequisite: BIO 331.

BIO 441 Cytogenetics. (3)

selected semesters

Chromosomal basis of inheritance. Cross-listed as PLB 412. Credit is allowed for only BIO 441 or PLB 412. Prerequisite: BIO 340.

BIO 442 Cytogenetics Laboratory. (2)

selected semesters

Microscopic analysis of meiosis, mitosis, and aberrant cell division. 6 hours lab. Cross-listed as PLB 413. Credit is allowed for only BIO 442 or PLB 413. Pre- or corequisite: BIO 441 or PLB 412.

BIO 446 Principles of Human Genetics. (3)

once a year

Molecular and cellular analysis of the human genome. Prerequisite: BIO 340.

General Studies: L

BIO 450 Advanced Developmental Biology. (3)

spring

Current concepts and experimental methods involving differentiation and biosynthetic activities of cells and organisms, with examples from microorganisms, plants, and animals. Prerequisite: BIO 351.

BIO 451 Cell Biotechnology Laboratory. (3)

fall

Mammalian cell culture techniques, including mouse embryonic stem cells, the use of bioreactors, cell fractionation, and digital video imaging. Lab. Cross-listed as BME 451. Credit is allowed for only BIO 451 or BME 451. Prerequisites: BIO 353; instructor approval.

BIO 453 Animal Histology. (4)

spring

Microscopic study of animal tissues. 3 hours lecture, 3 hours lab. Fee. Prerequisite: BIO 187 or instructor approval.

BIO 464 Photobiology. (3)

selected semesters

Principles underlying the effects of light on growth, development, and behavior of plants, animals, and microorganisms. Cross-listed as PLB 440. Credit is allowed for only BIO 464 or PLB 440. Prerequisites: CHM 231 (or 331); 12 hours in life sciences.

BIO 465 Neurophysiology. (3)

spring in even years

Detailed treatment of cellular and organismal neurophysiology and nervous system function. Prerequisite: BIO 360.

BIO 466 Neurophysiology Laboratory. (2)

selected semesters

Intracellular and extracellular electrophysiological recording techniques, histological preparations, and dye-filling techniques. 6 hours lab. Pre- or corequisite: BIO 465.

BIO 470 Systematic Zoology. (4)*spring in odd years*

Philosophy, theory, practice of interpreting animal diversity, including species concepts speciation, nomenclature, and evolutionary and phylogenetic classification emphasizing phylogenetics. 3 hours lecture, 3 hours lab. Prerequisites: junior standing; 18 hours in life sciences.

*General Studies: L***BIO 471 Ornithology. (3)***spring in odd years*

Biology of birds. 2 hours lecture, 3 hours lab, weekend field trips. Fee. Prerequisite: BIO 370 or instructor approval.

BIO 472 Mammalogy. (4)*fall in odd years*

Classification, structure, habits, ecology, and distribution of mammals, emphasizing North American forms. 3 hours lecture, 3 hours lab or field trip, weekend field trips. Fee. Prerequisite: BIO 370 or instructor approval.

BIO 473 Ichthyology. (3)*spring in odd years*

Systematics and biology of recent and extinct fishes. 2 hours lecture, 3 hours lab or field trip, weekend field trips. Fee. Prerequisites: both BIO 370 and 425 or only instructor approval.

BIO 474 Herpetology. (3)*spring in even years*

Systematics and biology of recent and extinct reptiles and amphibians. 2 hours lecture, 3 hours lab or field trip. Fee. Prerequisite: BIO 370.

BIO 480 Methods of Teaching Biology. (3)*spring*

Methods of instruction, experimentation, organization, and presentation of appropriate content in biology. Prerequisite: 20 hours in the biological sciences.

BIO 482 Advanced Methods of Teaching Biology. (3)*fall in odd years*

Design, delivery, and evaluation of student-centered, inquiry-based lessons for high school biology students. Learning cycle. Prerequisite: BIO 480.

BIO 484 Internship. (3)*selected semesters***BIO 490 Surgical Field Placement. (3)***fall, spring, summer*

Advanced field placement for students exploring a career in a health profession. Requires classroom sessions and field work. May be repeated for credit. Lecture, lab. Prerequisites: application; instructor approval. Pre- or corequisite: BIO 390.

BIO 493 Honors Thesis. (1–6)*fall, spring, summer**General Studies: L***BIO 494 Special Topics. (1–4)***selected semesters*

Topics may include the following:

- Cell Biotechnology. (4)

BIO 495 Undergraduate Thesis. (3)*fall, spring, summer*

Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters. Prerequisites: at least 3 hours of BIO 310 (or 499); formal conference with instructor; instructor and department chair approval.

BIO 499 Individualized Instruction. (1–3)*fall and spring*

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

**CLINICAL LABORATORY SCIENCES/
MEDICAL TECHNOLOGY (CLS)****CLS 100 Introduction to Clinical Laboratory Sciences. (1)***fall*

Introduces the field of clinical laboratory sciences. Required for Clinical Laboratory Sciences majors.

CLS 310 Principles of Clinical Chemistry I. (6)*spring*

Theory and application of principles of clinical chemistry, with emphasis on laboratory techniques, pathophysiology, methods of analysis, and assessment of procedure. 3 hours lecture, 9 hours lab. Fee. Prerequisite: admission to the Clinical Laboratory Sciences professional study program.

CLS 320 Principles of Clinical Microbiology I. (6)*spring*

Theory and application of principles of clinical microbiology with emphasis on isolation and identification of medically significant fungi and bacteria. 3 hours lecture, 9 hours lab. Fee. Prerequisite: admission to the Clinical Laboratory Sciences professional study program.

CLS 330 Principles of Clinical Hematology I/Body Fluids. (3)*fall*

Theory and application of principles in hematology, with emphasis on techniques to evaluate blood dyscrasias and analyze body fluids. 2 hours lecture, 3 hours lab. Prerequisite: admission to the Clinical Laboratory Sciences professional study program.

CLS 410 Principles of Clinical Chemistry II. (2)*summer*

Continuation of CLS 310 with emphasis on principles of advanced clinical chemistry. 1 hour lecture, 3 hours lab. Prerequisite: admission to the Clinical Laboratory Sciences professional study program.

CLS 411 Advanced Applications of Clinical Chemistry. (4)*fall*

Clinical application of theory/techniques from CLS 310 and 410. Emphasizes operation of common laboratory instrumentation and clinical correlation. Minimum 180 hours practicum. Prerequisite: admission to the Clinical Laboratory Sciences professional study program.

CLS 420 Principles of Microbiology II. (2)*summer*

Disease mechanisms and identification of medically significant parasites, Mycobacteria, Actinomycetes, Chlamydia, Rickettsia, Mycoplasma, and viruses. 1 hour lecture, 3 hours lab. Prerequisite: admission to the Clinical Laboratory Sciences professional study program.

CLS 421 Advanced Applications of Clinical Microbiology. (4)*spring*

Practical laboratory application of the principles of specimen collection, processing, detection, identification, and antimicrobial testing of medically significant bacteria, fungi, and parasites. Minimum 180 hours practicum. Prerequisite: admission to the Clinical Laboratory Sciences professional study program.

CLS 430 Principles of Clinical Hematology II/Hemostasis. (3)*fall*

Theory and applications of principles in hematology with emphasis on etiology, pathophysiology, clinical manifestations, and treatment of blood dyscrasias/hemostatic defects. 2 hours lecture, 3 hours lab. Prerequisite: admission to the Clinical Laboratory Sciences professional study program.

CLS 431 Advanced Applications of Clinical Hematology. (4)*spring*

Practical laboratory application of methods/techniques used to evaluate and diagnose blood dyscrasias/hemostatic defects. Applied techniques in body fluid analysis. Minimum 180 hours practicum. Prerequisite: admission to the Clinical Laboratory Sciences professional study program.

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

CLS 440 Principles of Clinical Immunology/Immunohematology. (4)

fall

Theoretical and practical application of clinical immunology and immunohematology. Emphasizes serological techniques that aid disease diagnosis and blood donor selection. 3 hours lecture, 3 hours lab. Prerequisite: admission to the Clinical Laboratory Sciences professional study program.

CLS 441 Advanced Applications of Clinical Immunology/Immunohematology. (3)

spring

Practical laboratory application of the principles of serological methods used in diagnosing disease and selecting blood components for transfusion therapy. Minimum 135 hours practicum. Prerequisite: admission to the Clinical Laboratory Sciences professional study program.

CLS 450 Principles of Clinical Laboratory Administration. (2)

fall and spring

Principles of management, with emphasis on the clinical laboratory. Basic management process, personnel supervision, identification, and allocation of resources. Prerequisite: admission to the Clinical Laboratory Sciences professional study program.

General Studies: L (if credit also earned in CLS 460)

CLS 460 Principles of Clinical Laboratory Education. (1)

spring

Principles of learning, with application to the development of instructional objectives, strategies, and evaluation for teaching-learning situations in the laboratory. Prerequisite: admission to the Clinical Laboratory Sciences professional study program.

General Studies: L (if credit also earned in CLS 450)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

HISTORY AND PHILOSOPHY OF SCIENCE (HPS)

HPS 311 Origins, Evolution, and Creation. (3)

selected semesters

Examines scientific, mythic, and religious ideas relating to origins (particularly human). Place of antievolutionism and "scientific creationism" in American culture. Lecture, discussion. Cross-listed as BIO 344/HUM 371/REL 383. Credit is allowed for only BIO 344 or HPS 311 or HUM 371 or REL 383.

HPS 314 Philosophy of Science. (3)

once a year

Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation. Cross-listed as PHI 314. Credit is allowed for only HPS 314 or PHI 314.

General Studies: HU

HPS 322 History of Science. (3)

once a year

Development and application of scientific thinking from ancient times through the 17th century.

General Studies: HU, H

HPS 323 History of Science. (3)

selected semesters

Development and application of scientific thinking from the 18th century to the present.

General Studies: HU, H

HPS 325 Chinese Science and Medicine. (3)

selected semesters

Explores development of Chinese traditions dealing with the natural world, science, and medicine. Lecture, discussion. Cross-listed as HST 385. Credit is allowed for only HPS 325 or HST 385.

General Studies: HU, G, H

HPS 330 History of Biology: Conflicts and Controversies. (3)

selected semesters

Focuses on 19th and 20th centuries, considering biology as a discipline. Evolution, problems of heredity, development, and cell theory. Cross-listed as BIO 316. Credit is allowed for only BIO 316 or HPS 330.

General Studies: H

HPS 331 History of Medicine. (3)

once a year

Scientific study of the human body, changing theories of disease, evolution of practical opinions on treatment, and the emerging institutionalization of medical practice. Cross-listed as BIO 318. Credit is allowed for only BIO 318 or HPS 331.

General Studies: H

HPS 332 The Darwinian Revolution. (3)

selected semesters

Intellectual and cultural history of Darwinism and modern evolutionary theory and their impact on 19th- and 20th-century thought. Lecture, discussion. Cross-listed as BIO 346/HUM 372. Credit is allowed for only BIO 346 or HPS 332 or HUM 372.

HPS 340 Biology and Society. (3)

fall

Explores interactions between biological sciences and society, e.g., biomedical, environmental, ethical, historical, legal, philosophical, political, and social issues. Lecture, discussion. Cross-listed as BIO 311. Credit is allowed for only BIO 311 or HPS 340. Prerequisites: both BIO 187 and 188 or only BIO 193 (or 100).

HPS 377 Nature in Context. (3)

fall

Explores perspectives on the nature of nature, the history of ecology, and the rise of environmentalism. Seminar. Cross-listed as HON 377. Credit is allowed for only HON 377 or HPS 377.

General Studies: L/HU

HPS 402 Technology, Society, and Human Values. (3)

once a year

Values that motivate humankind to create technology. Areas of conflict and resolution of conflict between values and technology. Readings and discussions with visiting lecturers. Prerequisite: junior standing.

HPS 410 Professional Values in Science. (3)

once a year

Considers issues related to values in science such as collaboration, finances, legal issues, media, mentoring, ownership of ideas, scientific integrity. Discussion, student projects. Cross-listed as BIO 416. Credit is allowed for only BIO 416 or HPS 410.

General Studies: L

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

MOLECULAR BIOSCIENCES/BIOTECHNOLOGY (MBB)

MBB 245 Cellular and Molecular Biology. (3)

fall and spring

Concepts that underlie relationships between cellular and subcellular structure and function, and integration of major metabolic and genetic processes. Prerequisite: life science major or preprofessional student in health-related sciences.

General Studies: SQ (if credit also earned in MBB 246)

MBB 246 Cellular and Molecular Biology Laboratory. (1)

fall and spring

Experiments that illustrate relationships between structure, function, and genetic processes at the cellular and molecular level. Lab. Prerequisite: MBB 245.

General Studies: SQ (if credit also earned in MBB 245)

MBB 247 Applied Biosciences: Biotechnology. (3)

fall and spring

Applies concepts of molecular and cellular biology of bacteria, animals, and plants to real-world problems. Prerequisite: MBB 245, 246. Corequisite: MBB 248.

MBB 248 Applied Biosciences: Biotechnology Laboratory. (1)

fall and spring

Applies concepts of molecular and cellular biology of bacteria, animals, and plants to real-world problems. Lab. Prerequisite: MBB 245, 246. Corequisite: MBB 247.

MBB 343 Genetic Engineering and Society. (4)

fall

Introduces genetic engineering, with emphasis on applications (gene therapy, DNA fingerprinting, bioremediation, transgenic animals and plants). 3 hours lecture, 3 hours lab. Cross-listed as BIO 343. Credit is allowed for only BIO 343 or MBB 343. Fee. Prerequisites: preferably both MBB 245 and 246 or only BIO 188 (or its equivalent).

General Studies: L

MBB 350 Applied Genetics. (4)*spring*

Introduces molecular genetics with emphasis on application of genetics in solving biological questions and engineering organisms in biotechnology. 2 hours lecture, 6 hours lab. Cross-listed as PLB 350. Credit is allowed for only MBB 350 or PLB 350. Fee. Prerequisites: preferably both MBB 245 and 246 or only BIO 188 (or its equivalent).

MBB 445 Techniques in Molecular Biology/Genetics. (2)*fall and spring*

Molecular genetic principles: plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation, immunologic detection, and electrophoresis. Cross-listed as MIC 445. Credit is allowed for only MBB 445 or MIC 445. Prerequisites: both BIO 340 and MIC 302 or only instructor approval.

MBB 446 Techniques in Molecular Biology/Genetics Lab. (2)*fall and spring*

Molecular genetic techniques; plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation; immunologic detection and electrophoresis. Cross-listed as MIC 446. Credit is allowed for only MBB 446 or MIC 446. Pre- or corequisite: MBB 445 or MIC 445.

MBB 484 Internship. (3)*selected semesters***MBB 490 Capstone: Issues in Biotechnology. (2)***fall and spring*

Integrates science and humanities within problem-solving exercises dealing with intellectual property, ethics, regulatory issues, business practices, and commercialization. May be repeated for credit. Prerequisite: Molecular Biosciences/Biotechnology major or instructor approval.

General Studies: L (must be taken twice to secure L credit)

MBB 499 Individualized Instruction. (3)*selected semesters*

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

MOLECULAR AND CELLULAR BIOLOGY (MCB)

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

MICROBIOLOGY (MIC)**MIC 205 Microbiology. (3)***fall, spring, summer*

Basic course for students without credit in BIO 188, emphasizing general principles; role of microorganisms in health, ecology, and applied fields. May not be used for Microbiology major credit unless a diagnostic test is passed. Prerequisites: both BIO 100 (or PLB 108) and CHM 101 or only instructor approval.

General Studies: SG (if credit also earned in MIC 206)

MIC 206 Microbiology Laboratory. (1)*fall, spring, summer*

Principles and laboratory techniques used in identifying and handling microorganisms. 3 hours lab. Fee. Pre- or corequisite: MIC 205 or 220.

General Studies: SG (if credit also earned in MIC 205)

MIC 220 Biology of Microorganisms. (3)*fall and spring*

Basic course for students with credit in BIO 188. Detailed study of microbial cells, their structure, genetics, physiology, and taxonomy. Corequisites: BIO 187; CHM 115.

MIC 302 Advanced Bacteriology Laboratory. (2)*fall and spring*

Advanced laboratory techniques in bacterial growth, physiology, genetics, and microscopy. Required of Microbiology majors. 4 hours lab. Fee. Prerequisites: completion of General Studies L requirement and either (a) MIC 206 and 220 or (b) MIC 205 and 206 and instructor approval.

General Studies: L (if credit also earned in MIC 401)

MIC 360 Bacterial Physiology. (3)*fall and spring*

Mechanisms and control of cell metabolism, structures, and functions. Prerequisite: MIC 220. Pre- or corequisite: BCH 361 or instructor approval.

MIC 380 Medical Parasitology. (3)*fall*

Parasitic diseases of humans, including life cycle events and clinical manifestations. Prerequisite: MIC 205 or 220.

MIC 381 Pathogenic Microbes. (3)*spring*

Host-microbial interactions in infectious disease, with emphasis on pathogenesis, host defenses, and molecular mechanisms of microbial virulence. Prerequisite: MIC 360 or 6 hours in microbiology with instructor approval.

MIC 394 Special Topics. (1–4)*selected semesters*

Topics may include the following:

- HIV Disease and AIDS in America
- Medical Immunology

MIC 401 Research Paper. (1)*fall, spring, summer*

Paper of 15 or more pages based on library or laboratory research in collaboration with a faculty member. Required of all Microbiology majors. Prerequisites: MIC 302; completion of General Studies L requirement.

General Studies: L (if credit also earned in MIC 302)

MIC 420 Immunology: Molecular and Cellular Foundations. (3)*fall*

Molecular and cellular foundations of immunology. Antibody/antigen interactions, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives. Prerequisites: both CHM 231 (or 331) and MIC 205 (or 220) or only instructor approval.

MIC 421 Experimental Immunology. (2)*fall and spring*

Introduces the basic techniques, methods, and assays used in immunology. 6 hours lab. Fee. Prerequisites: a combination of CHM 231 and 331 and MIC 302 or only instructor approval.

MIC 425 Advanced Immunology. (3)*selected semesters*

Survey of recent advances in immunology, including lymphocyte membranes, lymphokines/biochemistry, molecular genetics, theoretical immunology, immunoregulation, neuroimmunology, and immunologic diseases. Prerequisite: MIC 420 or instructor approval.

MIC 441 Bacterial Genetics. (3)*spring*

Survey of genetic exchange and regulatory processes in bacteria and their viruses. Bacteria and viruses as tools in genetic engineering. Prerequisites: both BIO 340 and MIC 205 (or 220) or only instructor approval.

MIC 442 Bacterial Genetics Laboratory. (1)*fall*

Techniques of mutagenesis, mapping, and strain and genetic library construction. 4 hours lab. Prerequisites: MIC 206, 302. Pre- or corequisite: MIC 441.

MIC 445 Techniques in Molecular Biology/Genetics. (2)*fall and spring*

Molecular genetic principles: plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation; immunologic detection and electrophoresis. Cross-listed as MBB 445. Credit is allowed for only MBB 445 or MIC 445. Prerequisites: both BIO 340 and MIC 302 or only instructor approval.

MIC 446 Techniques in Molecular Biology/Genetics Lab. (2)*fall and spring*

Molecular genetic techniques; plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

analysis; protein quantitation; immunologic detection and electrophoresis. Cross-listed as MBB 446. Credit is allowed for only MBB 446 or MIC 446. Pre- or corequisite: MBB 445 or MIC 445.

MIC 461 Geomicrobiology. (3)

spring

Past and present interactions among microbial life, geological materials, and biogeochemical cycles involving carbon, sulfur, phosphate, nitrogen, and metals. Cross-listed as GLG 461. Credit is allowed for only GLG 461 or MIC 461. Prerequisites: introductory courses in chemistry and microbiology (or geological sciences); instructor approval.

MIC 470 Bacterial Diversity and Systematics. (4)

selected semesters

Biology, classification, and enrichment culture of the nonpathogenic bacteria. 2 hours lecture, 6 hours lab. Fee. Prerequisite: MIC 302.

MIC 484 Internship. (1–12)

fall, spring, summer

Topics may include the following:

- Service Learning Internship. (3)
Fee.

MIC 485 General Virology. (3)

fall

Fundamental nature of viruses, their replication, pathogenesis, and ecology. Prerequisites: both BIO 340 and CHM 331 or only instructor approval.

MIC 494 Special Topics. (1–4)

selected semesters

Topics may include the following:

- Clinical Bacteriology Laboratory. (3)
- Service Learning (Bioreach). (3)

MIC 495 Undergraduate Research. (1–6)

fall, spring, summer

Supervised research in microbiology. May be repeated for credit. Lab. Prerequisites: MIC 206, 220, 302; instructor approval.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

PLANT BIOLOGY (PLB)

PLB 108 Concepts in Plant Biology. (4)

fall, spring, summer

Introduces concepts of plant biology that are of human relevance using commercially important, edible, and medicinal plants as examples. Not for majors in the biological sciences. 3 hours lecture, 3 hours lab. Fee.

General Studies: SQ

PLB 200 Biology of Plants. (3)

fall, spring, summer

Analyzes the structure/function interaction for plant cells and tissues and properties that emerge in whole plants. Prerequisites: high school biology and chemistry.

General Studies: SQ (if credit also earned in PLB 201)

PLB 201 Biology of Plants Laboratory. (1)

fall, spring, summer

Lab/field experiments to teach techniques and protocols of the scientific process; reinforces concepts from lecture by asking questions and solving problems. Lab. Prerequisites: high school biology and chemistry.

General Studies: SQ (if credit also earned in PLB 200)

PLB 300 Comparative Plant Diversity. (4)

fall

Surveys major plant groups and other photosynthetic organisms. Emphasizes comparative data analysis, evolutionary inference, and phylogenetic methods. 3 hours lecture, 3 hours lab. Fee. Prerequisites: preferably both PLB 200 and 201 or only BIO 187 (or its equivalent).

General Studies: L/SG

PLB 302 Plants and Civilization. (3)

fall

Plants and plant products used by people throughout the world. Cultivation, processing, and uses in modern life (beverages, fibers, foods, medicinals, and perfumes). Prerequisites: preferably both PLB 200 and 201 (or 108) or only BIO 187 (or its equivalent).

PLB 304 Biology of Algae and Fungi. (3)

selected semesters

Ecology, economics, and evolutionary diversity of the algae and fungi. Traditional and modern biotechnological uses. 2 hours lecture, 3 hours lab. Prerequisites: preferably both PLB 200 and 201 or only BIO 187 (or its equivalent).

PLB 305 Desert Annuals and Cacti. (3)

fall

Adaptive biology of select plants. Analyzes diverse traits permitting survival in deserts: reproduction, structure, and physiology. Prerequisites: preferably both PLB 200 and 201 or only BIO 187 (or its equivalent).

PLB 306 Plant Anatomy. (4)

fall

Development and mature structure of tissues of vascular plants; patterns and modifications of the leaf, stem, root, and flower. 3 hours lecture, 3 hours lab. Prerequisites: preferably both PLB 200 and 201 or only BIO 187 (or its equivalent).

PLB 308 Plant Physiology. (4)

spring

Concepts of plant function: carbon metabolism, energy acquisition, regulation of growth and development, stress responses, and water and nutrient uptake. Fee. Prerequisites: preferably both PLB 200 and 201 or only BIO 187 (or its equivalent); CHM 101 (or 115 or 231).

PLB 310 The Flora of Arizona. (4)

spring

Principles of taxonomy; identification of Arizona plants. 2 hours lecture, 6 hours lab. Fee. Prerequisites: preferably both PLB 200 and 201 or only BIO 187 (or its equivalent).

PLB 400 Lichenology. (3)

spring in odd years

Chemistry, ecology, physiology, and taxonomy of lichens. 2 hours lecture, 3 hours lab. Prerequisites: preferably both PLB 200 and 201 or only BIO 187 (or its equivalent).

PLB 402 Mycology. (3)

spring

Fungal morphology and systematics with an introduction to fungal cell biology, ecology, economic significance, and growth and development. 2 hours lecture, 3 hours lab. Prerequisites: preferably both PLB 200 and 201 or only BIO 187 (or its equivalent) or only MIC 206.

PLB 404 Phycology. (4)

spring

Algae (both fresh water and marine forms), emphasizing field collection and identification of local representatives. Morphological, ecological, and economic aspects of the algae. 3 hours lecture, 3 hours lab. Fee. Prerequisites: preferably both PLB 200 and 201 or only BIO 187 (or its equivalent).

PLB 407 Plant Fossils and Evolution. (4)

spring in odd years

Broad survey of plant life of the past, including the structure of plant fossils, their geologic ranges, geographic distribution, and paleoenvironment. 3 hours lecture, 3 hours lab or field trip. Prerequisites: preferably both PLB 200 and 201 or only BIO 187 (or its equivalent).

PLB 410 Angiosperm Taxonomy. (3)

spring

Principles underlying angiosperm phylogeny. 2 hours lecture, 3 hours lab. Prerequisite: PLB 310 or instructor approval.

PLB 411 Trees and Shrubs of Arizona. (3)

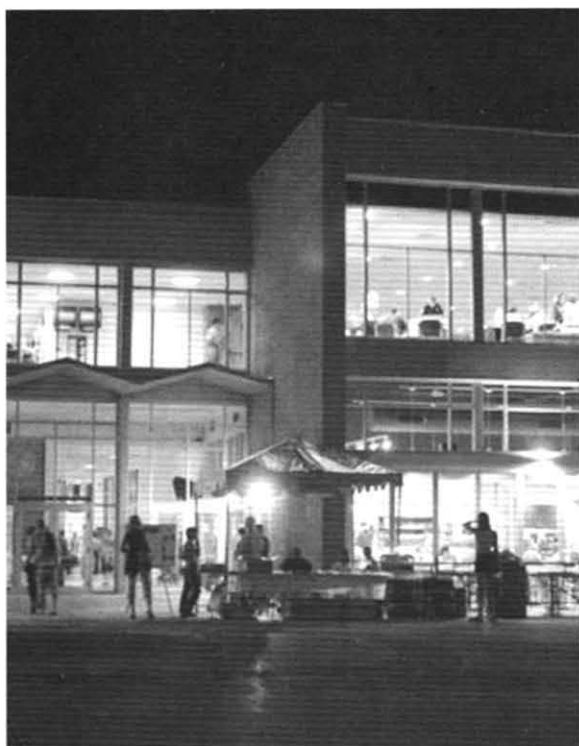
fall

Identification of woody plants from desert, chaparral, and forest habitats in Arizona. 1 hour lecture, 3 hours lab, field trips. Fee. Prerequisites: preferably both PLB 200 and 201 or only BIO 187 (or its equivalent) or only instructor approval.

PLB 412 Cytogenetics. (3)

selected semesters

Chromosomal basis of inheritance. Cross-listed as BIO 441. Credit is allowed for only BIO 441 or PLB 412. Prerequisite: BIO 340.



Recently renovated, the Memorial Union provides many community needs. In addition to a large amount of meeting space, it features a variety of amenities including a bowling alley, a food court, and a convenience store.

Tim Trumble photo

PLB 413 Cytogenetics Laboratory. (2)

selected semesters

Microscopic analysis of meiosis, mitosis, and aberrant cell division. 6 hours lab. Cross-listed as BIO 442. Credit is allowed for only BIO 442 or PLB 413. Pre- or corequisite: BIO 441 or PLB 412.

PLB 414 Plant Pathology. (3)

spring

Identification and control of biotic and abiotic factors that cause common disease problems to plants. Prerequisites: preferably both PLB 200 and 201 or only BIO 187 (or its equivalent) or only instructor approval.

General Studies: L

PLB 416 Medical Botany. (4)

summer

Explores plants affecting human health: modern- and folk-usage medicinal plants. Quality control, clinical evidence, plant chemistry, and ethnopharmacology. 3 hours lecture, 3 hours lab. Prerequisites: preferably both PLB 200 and 201 or only BIO 187 (or its equivalent) or only instructor approval.

PLB 484 Internship. (1–2)

selected semesters

Topics may include the following:

- Plant Biology Internship. (3)

fall and spring

Applies a simplified version of PLB 108 to teach fifth-grade children by planting gardens and conducting indoor plant experiments.

- Service Learning

fall, spring, summer

Fee.

PLB 498 Pro-Seminar. (1–7)

fall and spring

PLB 499 Individualized Instruction. (3)

selected semesters

Environmental Science and Ecology

PLB 320 Environmental Science (Nonmajor). (3)

fall

Environmental and biological concepts used to understand ecological systems with specific references to problems caused by humans. Cannot be used for major credit in the biological sciences. Cross-listed as BIO 319. Credit is allowed for only BIO 319 or PLB 320.

General Studies: G

PLB 322 Environmental Science (Major). (3)

fall

Nature of environmental and biological interaction: historical and modern examples, regional and global issues. Participation in environmental problem-solving activities. Lecture, lab. Prerequisites: preferably both PLB 200 and 201 or both GLG 110 and 111 or only GPH 111.

PLB 420 Plant Ecology: Organisms and Populations. (3)

spring in odd years

Factors and controls on the physiological ecology and organization of plants and plant populations using empirical and theoretical approaches. 2 hours lecture, 3 hours lab. Fee. Prerequisite: BIO 320 or PLB 322 (or its equivalent).

PLB 421 Plant Ecology: Communities and Ecosystems. (3)

spring in even years

Plant community organization, field sampling techniques, and the structure and function of terrestrial ecosystems emphasizing the role of vegetation. 2 hours lecture, 3 hours lab. Fee. Prerequisite: BIO 320 or PLB 322 (or its equivalent).

PLB 422 Plant Geography. (3)

selected semesters

Plant communities of the world and their interpretation, emphasizing North American plant associations. Cross-listed as GPH 422. Credit is allowed for only GPH 422 or PLB 422. Prerequisites: preferably both PLB 200 and 201 or only BIO 187 or only GPH 111.

PLB 430 Statistical Analyses in Environmental Science. (3)

spring

ANOVAS, 1-way classification of factorial and partially hierarchic designs; introductory multivariate statistics. Fee. Prerequisite: MAT 210 (or its equivalent).

General Studies: CS

PLB 432 Computer Applications in Biology. (3)

fall

Computer analysis techniques in biology emphasizing data entry, management and analysis, and graphic portrayal. Employs mainframe and microcomputers. 2 hours lecture, 3 hours lab. Cross-listed as BIO 406. Credit is allowed for only BIO 406 or PLB 432. Fee. Prerequisites: both BIO 187 and MAT 117 (or 210) or only instructor approval.

General Studies: CS

PLB 434 Landscape Ecological Analysis and Modeling. (3)

spring in odd years

Technical methods of landscape ecological analyses. Includes mathematical and statistical examination and modeling of landscape ecological patterns and processes. Prerequisites: both BIO 320 and 406 or only PLB 432 (or its equivalent).

Plant Biochemistry and Molecular Biology

PLB 350 Applied Genetics. (4)

spring

Introduces molecular genetics with emphasis on application of genetics in solving biological questions and engineering organisms in biotechnology. 2 hours lecture, 6 hours lab. Cross-listed as MBB 350. Credit is allowed for only MBB 350 or PLB 350. Fee. Prerequisites: preferably both MBB 245 and 246 or only BIO 188 (or its equivalent).

PLB 440 Photobiology. (3)

selected semesters

Principles underlying the effects of light on growth, development, and behavior of plants, animals, and microorganisms. Cross-listed as BIO 464. Credit is allowed for only BIO 464 or PLB 440. Prerequisites: CHM 231 (or 331); 12 hours in life sciences.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 91.

PLB 444 Plant Growth and Development. (3)

spring

Molecular basis of development, role of signal transduction pathways/ gene regulation in control of organ formation, pollination, germination, and growth. Prerequisite: BIO 353.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

**Department of Mathematics
and Statistics**

math.la.asu.edu

480/965-3951

PS A216

Andrew Bremner, Chair

Professors: Armbruster, Bremner, Gardner, Hoppensteadt, Ihrig, Z. Jackiewicz, Kadell, Kawski, Kierstead, Kostelich, Kuang, Kuiper, Lai, Lohr, Lopez, Mahalov, Mittelman, Nicolaenko, Quigg, Renaut, Ringhofer, Smith, Thieme, Young

Associate Professors: Baer, Barcelo, Blount, Carlson, Childress, Farmer, Gelb, Hurlbert, D. Jones, J. Jones, McCarter, Moore, Nikitin, Prewitt, Spielberg, Suslov, Taylor, Welfert

Assistant Professors: Czygrinow, Kaliszewski, Oehrtman, Oleson, Zandieh

Senior Lecturers: Abramson, Isom, Kolossa, Miller, Odish, Rody, Ruedemann, Surgent, Trapuzzano, Vaz, Zhu

Lecturers: Arce, Ashbrook, Bloom, Coombs, Downs, Gust, E. Jackiewicz, E. Jones, Kellgren, Kim, Maris, Martin, Masilamani, Pecuch-Herrero, Reynolds, Tracogna, Turner, Ward, Williams

The Department of Mathematics and Statistics offers the B.A. and B.S. degrees in Mathematics. Students who plan to attend graduate school in mathematics or statistics should choose the B.S. degree.

The department also offers the B.S. degree in Computational Mathematical Sciences.

The department also offers a minor in Mathematics and an academic specialization in mathematics for students pursuing the B.A.E. degree in Secondary Education.

Related Field Course List. All students majoring in Mathematics need to refer to the related field course list. It is available from an advisor in PS A211, or from the department Web site at math.la.asu.edu/~undergrd/underprog/degree/related-fields.html.

MATHEMATICS—B.A.

The B.A. degree in Mathematics requires a minimum of 36 semester hours of course work in mathematics and statistics, and additional course work in closely related fields, for a total of 51 semester hours. A grade of "C" (2.00) or higher is required in all courses taken for the major. MAT 370 and 371 may not both be used to satisfy these degree requirements. The required course work has the following components:

Core Courses

MAT 270 Calculus with Analytic Geometry I <i>MA</i>	4
MAT 271 Calculus with Analytic Geometry II <i>MA</i>	4
MAT 272 Calculus with Analytic Geometry III <i>MA</i>	4
MAT 300 Mathematical Structures <i>L</i>	3
MAT 342 Linear Algebra.....	3
or MAT 343 Applied Linear Algebra (3)	
MAT 370 Intermediate Calculus.....	3
or MAT 371 Advanced Calculus I (3)	
Total.....	21

Computer Science Requirement

CSE 100 Principles of Programming with C++ <i>CS</i>	3
or CSE 110 Principles of Programming Java (3)	
or CSE 200 Concepts of Computer Science <i>CS</i> (3)	
Total.....	3

Advanced Courses in Mathematics and Statistics
Two courses from the following list, both preferably taken from the same grouping.....

	6
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Algebra, Topology, and Number Theory

MAT 410 Introduction to General Topology (3)	
MAT 442 Advanced Linear Algebra (3)	
MAT 443 Introduction to Abstract Algebra (3)	
MAT 444 Intermediate Abstract Algebra (3)	
MAT 445 Theory of Numbers (3)	

Analysis and Applications

MAT 372 Advanced Calculus II (3)	
MAT 461 Applied Complex Analysis (3)	
MAT 472 Intermediate Real Analysis I (3)	

Applied Mathematics and Dynamics

MAT 451 Mathematical Modeling <i>CS</i> (3)	
MAT 452 Introduction to Chaos and Nonlinear Dynamics (3)	
MAT 455 Introduction to Fractals and Applications (3)	

Computational Mathematics

MAT 420 Scientific Computing (3)	
MAT 421 Applied Computational Methods <i>CS</i> (3)	
MAT 423 Numerical Analysis I <i>CS</i> (3)	
MAT 425 Numerical Analysis II <i>CS</i> (3)	
MAT 427 Computer Arithmetic <i>CS</i> (3)	

Differential Equations

MAT 462 Applied Partial Differential Equations (3)	
MAT 475 Differential Equations (3)	
MAT 476 Partial Differential Equations (3)	

Discrete Mathematics

MAT 415 Introduction to Combinatorics (3)	
MAT 416 Introduction to Graph Theory (3)	
MAT 419 Introduction to Linear Programming <i>CS</i> (3)	

Statistics and Probability

STP 420 Introductory Applied Statistics <i>CS</i> (3)	
STP 421 Probability (3)	
STP 425 Stochastic Processes (3)	
STP 427 Mathematical Statistics (3)	
STP 429 Experimental Statistics <i>CS</i> (3)	

DEPARTMENT OF MATHEMATICS AND STATISTICS

Additional Course Work in Mathematics and Statistics
 Three courses in mathematics and statistics¹.....9

Related Field Course Work
 Course work in mathematics, statistics, or related fields²12

¹ Acceptable mathematics courses are MAT 243, 274, and upper-division MAT courses, with the exception of MAT 362, 485, and ASU West MAT 411. Acceptable statistics courses are upper-division STP courses.

² See "Related Field Course List," page 414.

MATHEMATICS—B.S.

The Department of Mathematics and Statistics has three avenues for earning a B.S. degree. The B.S. requirements are similar to the B.A. requirements, but they require more extensive courses in advanced mathematics. The program is flexible enough to allow students to focus their studies on mathematics, applied mathematics, or statistics. The statistics concentration offers extensive preparation in applied and theoretical statistics. The requirements for the B.S. degree with the statistics concentration are a subset of those for the B.S. degree. The requirements for the B.S. degree and for the B.S. degree with the computational mathematical sciences concentration are distinct; neither is a subset of the other.

B.S. Requirements. The B.S. degree in Mathematics requires a minimum of 42 semester hours of course work in mathematics and statistics, and additional course work in closely related fields, for a total of 55 semester hours. A grade of "C" (2.00) or higher is required in all courses taken for the major. MAT 370 and 371 may not both be used to satisfy these degree requirements. Credit may not be earned for both MAT 274 and 275 or for both MAT 342 and 343. The required course work has the following components:

Core Courses

MAT 270 Calculus with Analytic Geometry I <i>MA</i>	4
MAT 271 Calculus with Analytic Geometry II <i>MA</i>	4
MAT 272 Calculus with Analytic Geometry III <i>MA</i>	4
MAT 300 Mathematical Structures <i>L</i>	3
MAT 342 Linear Algebra	3
or MAT 343 Applied Linear Algebra (3)	
MAT 371 Advanced Calculus I.....	3
Total	21

Computer Science Requirement

CSE 200 Concepts of Computer Science <i>CS</i>	3
Total	3

Depth Requirement

Two courses chosen from the following list of advanced courses	6
MAT 415 Introduction to Combinatorics (3)	
MAT 416 Introduction to Graph Theory (3)	
MAT 423 Numerical Analysis I <i>CS</i> (3)	
MAT 425 Numerical Analysis II <i>CS</i> (3)	
MAT 442 Advanced Linear Algebra (3)	
MAT 444 Intermediate Abstract Algebra (3)	
MAT 462 Applied Partial Differential Equations (3)	
MAT 472 Intermediate Real Analysis I (3)	
MAT 473 Intermediate Real Analysis II (3)	
MAT 475 Differential Equations (3)	
MAT 476 Partial Differential Equations (3)	

STP 421 Probability (3)	
STP 427 Mathematical Statistics (3)	

Advanced Courses in Mathematics and Statistics¹
 Two courses from the following list, both preferably taken from the same grouping.....6

Algebra, Topology, and Number Theory

MAT 410 Introduction to General Topology (3)	
MAT 442 Advanced Linear Algebra (3)	
MAT 443 Introduction to Abstract Algebra (3)	
MAT 444 Intermediate Abstract Algebra (3)	
MAT 445 Theory of Numbers (3)	

Analysis and Applications

MAT 372 Advanced Calculus II (3)	
MAT 461 Applied Complex Analysis (3)	
MAT 472 Intermediate Real Analysis I (3)	

Applied Mathematics and Dynamics

MAT 451 Mathematical Modeling <i>CS</i> (3)	
MAT 452 Introduction to Chaos and Nonlinear Dynamics (3)	
MAT 455 Introduction to Fractals and Applications (3)	

Computational Mathematics

MAT 420 Scientific Computing (3)	
MAT 421 Applied Computational Methods <i>CS</i> (3)	
MAT 423 Numerical Analysis I <i>CS</i> (3)	
MAT 425 Numerical Analysis II <i>CS</i> (3)	
MAT 427 Computer Arithmetic <i>CS</i> (3)	

Differential Equations

MAT 462 Applied Partial Differential Equations (3)	
MAT 475 Differential Equations (3)	
MAT 476 Partial Differential Equations (3)	

Discrete Mathematics

MAT 415 Introduction to Combinatorics (3)	
MAT 416 Introduction to Graph Theory (3)	
MAT 419 Introduction to Linear Programming <i>CS</i> (3)	

Statistics and Probability

STP 420 Introductory Applied Statistics <i>CS</i> (3)	
STP 421 Probability (3)	
STP 425 Stochastic Processes (3)	
STP 427 Mathematical Statistics (3)	
STP 429 Experimental Statistics <i>CS</i> (3)	

Additional Course Work in Mathematics and Statistics²
 Three courses in mathematics and statistics9

Related Fields Course Work³
 Course work in mathematics, statistics, or related fields10

¹ Students who contemplate graduate work in mathematics should choose additional courses listed under the depth requirement to satisfy the advanced courses requirement.

² Acceptable mathematics courses are MAT 243, 274, and upper-division MAT courses, with the exception of MAT 310, 362, 485, and ASU West MAT 411. Acceptable statistics courses are 400-level STP courses.

³ See "Related Field Course List," page 414.

COMPUTATIONAL MATHEMATICAL SCIENCES—B.S.

The B.S. degree in Computational Mathematical Sciences curriculum strives to provide students with a background in

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

computer science and the natural or physical sciences in addition to a core of course work in mathematics. The requirements for the B.S. degree in Computational Mathematical Sciences and for the B.S. degree in Mathematics are distinct; neither is a subset of the other. A minimum grade of "C" (2.00) is required in all courses taken for the major.

The B.S. degree in Computational Mathematical Sciences requires a minimum of 32 semester hours of course work in mathematics and statistics, a minimum of 12 to 14 semester hours in science, nine hours in computer science, and a three hour advanced science course or internship/research credit. This adds up to a minimum of 56 to 58 semester hours of study related to the major.

Core Courses

MAT 243 Discrete Mathematical Structures	3
or MAT 300 Mathematical Structures <i>L</i> (3)	
MAT 271 Calculus with Analytic Geometry II <i>MA</i>	4
MAT 272 Calculus with Analytic Geometry III <i>MA</i>	4
Total	11

Core Courses in Computational Mathematics

MAT 274 Elementary Differential Equations <i>MA*</i>	3
or MAT 275 Modern Differential Equations <i>MA</i> (3)	
MAT 342 Linear Algebra*	3
or MAT 343 Applied Linear Algebra (3)	
MAT 420 Scientific Computing	3
MAT 421 Applied Computational Methods <i>CS</i>	3
Total	12

* MAT 275 and 343 are recommended.

Advanced Courses in Mathematics and Statistics

Choose one course from group one and two from group two.....9

Group One

MAT 362 Advanced Mathematics for Engineers and Scientists (3)
MAT 370 Intermediate Calculus (3)
MAT 371 Advanced Calculus I (3)
MAT 460 Vector Calculus (3)

Group Two

MAT 351 Mathematical Methods for Genetic Analysis <i>CS</i> (3)
MAT 415 Introduction to Combinatorics (3)
MAT 416 Introduction to Graph Theory (3)
MAT 419 Introduction to Linear Programming <i>CS</i> (3)
MAT 423 Numerical Analysis I <i>CS</i> (3)
MAT 425 Numerical Analysis II <i>CS</i> (3)
MAT 447 Cryptography (3)
MAT 451 Mathematical Modeling <i>CS</i> (3)
MAT 452 Introduction to Chaos and Nonlinear Dynamics (3)
MAT 455 Introduction to Fractals and Applications (3)
MAT 461 Applied Complex Analysis (3)
MAT 462 Applied Partial Differential Equations (3)
MAT 475 Differential Equations (3)
MAT 476 Partial Differential Equations (3)
STP 420 Introductory Applied Statistics <i>CS</i> (3)
STP 421 Probability (3)
STP 425 Stochastic Processes (3)
STP 427 Mathematical Statistics (3)
STP 429 Experimental Statistics <i>CS</i> (3)

Computer Science Requirement

CSE 200 Concepts of Computer Science <i>CS</i>	3
CSE 210 Object-Oriented Design and Data Structures <i>CS</i>	3

CSE 240 Introduction to Programming Languages	3
or CSE 310 Data Structures and Algorithms (3)	
Total	9

Science Requirement. Two one-year science course and lab sequences (for a total of 14–17 hours) are required. Upon advisor approval, two advanced courses for which the first one-year science and lab sequence is a prerequisite may be substituted for the second one-year science and lab sequence. Allowable one-year sequences include the following:

Astrophysics

Astrophysics sequence	8
AST 113 Astronomy Laboratory I <i>SQ</i> ¹ (1)	
AST 114 Astronomy Laboratory II <i>SQ</i> ¹ (1)	
AST 321 Introduction to Planetary and Stellar Astrophysics <i>SQ</i> ¹ (3)	
AST 322 Introduction to Galactic and Extragalactic Astrophysics <i>SQ</i> ¹ (3)	

Biology

Choose one of the following sequences	8
BIO 187 General Biology I <i>SG</i> (4)	
BIO 188 General Biology II <i>SQ</i> (4)	
— or —	
BIO 188 General Biology II <i>SQ</i> (4)	
BIO 193 The Nature of Biological Science <i>SQ</i> (4)	

Chemistry

Choose one of the following sequences	5–9
CHM 113 General Chemistry <i>SQ</i> (4)	
CHM 115 General Chemistry with Qualitative Analysis <i>SQ</i> (5)	
— or —	
CHM 113 General Chemistry <i>SQ</i> (4)	
CHM 116 General Chemistry <i>SQ</i> (4)	
— or —	
CHM 115 General Chemistry with Qualitative Analysis <i>SQ</i> ² (4)	
CHM 117 General Chemistry for Majors I <i>SQ</i> ² (4)	
— or —	
CHM 114 General Chemistry for Engineers <i>SQ</i> ³ (4)	
CHM 231 Elementary Organic Chemistry <i>SQ</i> ⁴ (3)	
CHM 235 Elementary Organic Chemistry Laboratory <i>SQ</i> ³ (1)	

Geology

Geology sequence	8
GLG 101 Introduction to Geology I (Physical) <i>SQ</i> , <i>G</i> ⁴ (3)	
GLG 103 Introduction to Geology I—Laboratory <i>SG</i> ⁴ (1)	
GLG 102 Introduction to Geology II (Historical) <i>SG</i> , <i>H</i> ⁴ (3)	
GLG 104 Introduction to Geology II—Laboratory <i>SG</i> ⁴ (1)	

Microbiology and Molecular Biosciences/Biotechnology

Choose one of the following sequences	4
MBB 245 Cellular and Molecular Biology <i>SQ</i> ⁶ (3)	
MBB 246 Cellular and Molecular Biology Laboratory <i>SQ</i> ⁶ (1)	
— or —	
MIC 205 Microbiology <i>SG</i> ⁵ (3)	
MIC 206 Microbiology Laboratory <i>SG</i> ⁵ (1)	
— or —	
MIC 206 Microbiology Laboratory <i>SG</i> ⁵ (1)	
MIC 220 Biology of Microorganisms (3)	

Physics

Choose one of the following sequences	8
PHY 121 University Physics I: Mechanics <i>SQ</i> ⁷ (3)	
PHY 122 University Physics Laboratory I <i>SQ</i> ⁷ (1)	

DEPARTMENT OF MATHEMATICS AND STATISTICS

PHY 131 University Physics II: Electricity and Magnetism SQ⁷ (3)
 PHY 132 University Physics Laboratory II SQ⁷ (1)
 — or —
 PHY 150 Physics I SQ (4)
 PHY 151 Physics II SQ (4)

Plant Biology

Choose one of the following sequences.....4
 PLB 200 Biology of Plants SQ⁸ (3)
 PLB 201 Biology of Plants Laboratory SQ⁸ (1)
 — or —
 MBB 245 Cellular and Molecular Biology SQ⁶ (3)
 MBB 246 Cellular and Molecular Biology Laboratory SQ⁶ (1)

Internship, Research, or Advanced Science Requirement

Choose one of the following courses.....3
 MAT 484 Internship⁹ (3)
 MAT 493 Honors Thesis/Research¹⁰ (3)
 MAT 494 ST: Independent Study/Research⁹ (3)
 One advanced course in science for which a one-year sequence in the same science is required

- ¹ Both AST 113 and 321 or both AST 114 and 322 must be taken to secure SQ credit.
- ² CHM 115 and 117 are strongly recommended for qualified students.
- ³ Both CHM 231 and 235 must be taken to secure SQ credit.
- ⁴ Both GLG 101 and 103 must be taken to secure SQ credit, and both GLG 102 and 104 must be taken to secure SG credit.
- ⁵ Both MIC 205 and MIC 206 must be taken to secure SG credit.
- ⁶ Both MBB 245 and 246 must be taken to secure SQ credit.
- ⁷ Both PHY 121 and 122 and both PHY 131 and 132 must be taken to secure SQ credit.
- ⁸ Both PLB 200 and 201 must be taken to secure SQ credit.
- ⁹ This course requires prior department approval.
- ¹⁰ Enrollment is restricted to students in the Barrett Honors College.

Restrictions: MAT 370 and 371 may not both be counted toward major requirements in Computational Mathematical Sciences. Credit may not be earned for both MAT 274 and 275, or for both MAT 342 and 343.

Statistics Concentration Requirements. The B.S. degree in Mathematics with the concentration in statistics requires a minimum of 42 semester hours of course work in mathematics and statistics, plus a minimum of 13 semester hours in computer science and related fields, for a minimum of 55 semester hours of course work related to the major. A grade of "C" (2.00) or higher is required in all courses taken for the major. MAT 370 and 371 may not both be used to satisfy these requirements. The course work has the following components:

Core Courses

MAT 270 Calculus with Analytic Geometry I MA.....4
 MAT 271 Calculus with Analytic Geometry II MA.....4
 MAT 272 Calculus with Analytic Geometry III MA.....4
 MAT 300 Mathematical Structures L.....3
 MAT 342 Linear Algebra.....3
 or MAT 343 Applied Linear Algebra (3)
 MAT 371 Advanced Calculus I.....3
 STP 420 Introductory Applied Statistics CS.....3

STP 421 Probability.....3
 STP 427 Mathematical Statistics.....3
 STP 429 Experimental Statistics CS.....3
 Total.....33

Computer Science Requirement

CSE 200 Concepts of Computer Science CS.....3
 Total.....3

Additional Advanced Courses in Mathematics and Statistics

Three courses from the following list.....9
 MAT 274 Elementary Differential Equations MA (3)
 or MAT 275 Modern Differential Equations (3)
 MAT 372 Advanced Calculus II (3)
 MAT 423 Numerical Analysis I CS (3)
 MAT 442 Advanced Linear Algebra (3)
 STP 425 Stochastic Processes (3)

Required Related Field Course Work

Statistics/probability, mathematics, or related fields*.....10

* See "Related Field Course List," page 414.

Actuarial Science. The faculty in the Department of Mathematics and Statistics offer courses that cover the content of the mathematical examinations of the Society of Actuaries. See the department's actuarial advisor for more information.

Cryptographic Science. The faculty in the Department of Mathematics and Statistics offer courses that prepare students for graduate studies and careers in cryptography. See the department's advisors for more information.

MINORS IN MATHEMATICS AND STATISTICS

The minor in Mathematics consists of a minimum of 20 semester hours. Required courses are as follows:

MAT 271 Calculus with Analytic Geometry II MA.....4
 MAT 272 Calculus with Analytic Geometry III MA.....4
 MAT 342 Linear Algebra.....3
 or MAT 343 Applied Linear Algebra (3)
 Total.....11

Electives must be upper-division courses in mathematics (MAT) or Statistics and Probability (STP). Students may not apply MAT 485 or a course not offered at the ASU Main campus to the minor, unless otherwise approved by a department advisor.

The minor in Statistics consists of a minimum of 20 semester hours. Required courses are the following:

MAT 271 Calculus with Analytic Geometry II MA.....4
 MAT 272 Calculus with Analytic Geometry III MA.....4
 MAT 300 Mathematical Structures L.....3
 STP 420 Introductory Applied Statistics CS.....3
 STP 421 Probability.....3
 STP 427 Mathematical Statistics.....3
 or STP 429 Experimental Statistics CS (3)
 Total.....20

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

The minor in Computational Mathematical Sciences consists of a minimum of 20 semester hours. Required courses are the following:

MAT 271 Calculus with Analytic Geometry II MA	4
MAT 272 Calculus with Analytic Geometry III MA	4
MAT 342 Linear Algebra	3
or MAT 343 Applied Linear Algebra (3)	
MAT 420 Scientific Computing	3
MAT 421 Applied Computational Methods CS	3
MAT 423 Numerical Analysis I CS	3
or MAT 425 Numerical Analysis II CS (3)	
Total	20

It is recommended that students take MAT 243 Discrete Mathematical Structures.

B.I.S. CONCENTRATIONS

Concentrations in computational mathematical sciences, mathematics, and statistics are available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 123.

SECONDARY EDUCATION—B.A.E.

Mathematics. This degree is offered through the Initial Teacher Certification program in the College of Education. Students pursuing a major in Secondary Education have an advisor in the College of Education and an advisor within the department of their academic specialization area.

See "College of Education," page 189, for information on admission eligibility requirements, admission deadlines, field experiences, and student teaching. For more information, or to schedule an appointment with an advisor, call the Office of Student Services in the College of Education at 480/965-5555.

The academic specialization consists of the following required courses:

CSE 100 Principles of Programming with C++ CS	3
or CSE 110 Principles of Programming Java (3)	
or CSE 200 Concepts of Computer Science CS (3)	
MAT 270 Calculus with Analytic Geometry I MA	4
MAT 271 Calculus with Analytic Geometry II MA	4
MAT 272 Calculus with Analytic Geometry III MA	4
MAT 300 Mathematical Structures L	3
MAT 310 Introduction to Geometry	3
MAT 342 Linear Algebra	3
or MAT 343 Applied Linear Algebra (3)	
MAT 370 Intermediate Calculus	3
or MAT 371 Advanced Calculus I (3)	
MAT 443 Introduction to Abstract Algebra	3
or MAT 445 Theory of Numbers (3)	
MTE 483 Mathematics in the Secondary School	3
STP 420 Introductory Applied Statistics CS	3
Total	36

The methods in academic specialization courses for mathematics are MTE 482 Methods of Teaching Mathemat-

ics in Secondary School and MTE 494 ST: Advanced Methods of Teaching Secondary Mathematics. They are required as part of the Initial Teacher Certification program but cannot be counted as part of the 36-hour major requirement.

Minor Teaching Field. The minor teaching field is a minor in mathematics for presecondary teachers, consisting of the following required courses:

MAT 271 Calculus with Analytic Geometry II MA	4
MAT 272 Calculus with Analytic Geometry III MA	4
MAT 300 Mathematical Structures L	3
MAT 310 Introduction to Geometry	3
MAT 342 Linear Algebra	3
or MAT 343 Applied Linear Algebra (3)	
MAT 370 Intermediate Calculus	3
or MAT 371 Advanced Calculus I (3)	
Total	20

GRADUATE PROGRAMS

The faculty in the Department of Mathematics and Statistics offer programs leading to the degrees of Master of Natural Science, M.A., and Ph.D. See the *Graduate Catalog* for requirements.

MATHEMATICS (MAT)

MAT 106 Intermediate Algebra. (3)

fall, spring, summer

Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals. Credit is allowed for only MAT 106 or 113. Prerequisite: 1 year of high school algebra.

MAT 113 College Algebra Plus. (5)

fall and spring

A union of topics from intermediate algebra and college algebra, including exponents, factoring, graphing, polynomials, logarithmic, and exponential functions. Credit is allowed for only MAT 113 or 106 or 117. Prerequisite: 2 years of high school mathematics.

General Studies: MA

MAT 114 College Mathematics. (3)

fall, spring, summer

Applications of basic college-level mathematics to real-life problems. Appropriate for students whose major does not require MAT 117 or 170. Prerequisite: MAT 106 or 2 years of high school algebra.

General Studies: MA

MAT 117 College Algebra. (3)

fall, spring, summer

Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics. Credit is allowed for only MAT 117 or 113. Fee (online only). Prerequisite: MAT 106 or 2 years of high school algebra.

General Studies: MA

MAT 119 Finite Mathematics. (3)

fall, spring, summer

Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance. Prerequisite: MAT 113 or 117 (or its equivalent).

General Studies: MA

MAT 170 Precalculus. (3)

fall, spring, summer

Intensive preparation for calculus (MAT 260, 270, and 290). Topics include functions (including trigonometric), matrices, polar coordinates, vectors, complex numbers, and mathematical induction. Prerequisite with a grade of "B" or higher: MAT 106. Prerequisite with a grade of "C" (2.00) or higher: MAT 113 or 117 (or its equivalent) or 2 years of high school algebra.

General Studies: MA

MAT 210 Brief Calculus. (3)*fall, spring, summer*

Differential and integral calculus of elementary functions with applications. Not open to students with credit for MAT 260, 270, or 290. Fee (online only). Prerequisite: MAT 113 or 117 (or its equivalent).

*General Studies: MA***MAT 242 Elementary Linear Algebra. (2)***fall, spring, summer*

Introduces matrices, systems of linear equations, determinants, vector spaces, linear transformations, and eigenvalues. Emphasizes development of computational skills. Prerequisite: 1 semester of calculus or instructor approval.

MAT 243 Discrete Mathematical Structures. (3)*fall, spring, summer*

Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science. Prerequisite: 1 semester of calculus or computer programming.

MAT 251 Calculus for Life Sciences. (3)*fall and spring*

Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences. Not open to students with credit for MAT 210, 260, or 270. Prerequisite: MAT 170 (or its equivalent).

*General Studies: MA***MAT 260 Technical Calculus I. (3)***selected semesters*

Analytic geometry, differential, and integral calculus of elementary functions, emphasizing physical interpretation and problem solving. Not open to students with credit for MAT 210, 270, or 290. Prerequisite: MAT 170 (or its equivalent).

*General Studies: MA***MAT 261 Technical Calculus II. (3)***selected semesters*

Continuation of MAT 260. Prerequisite: MAT 260 or instructor approval.

*General Studies: MA***MAT 262 Technical Calculus III. (3)***selected semesters*

Infinite series, an introduction to differential equations and elementary linear algebra. Prerequisite: MAT 261 (or its equivalent).

*General Studies: MA***MAT 270 Calculus with Analytic Geometry I. (4)***fall, spring, summer*

Real numbers, limits and continuity, and differential and integral calculus of functions of 1 variable. Not open to students with credit for MAT 290. The sequence MAT 270 and 271 may be substituted for MAT 290 to satisfy requirements of any curriculum. Fee. Prerequisite with a grade of "C" (2.00) or higher: MAT 170 or satisfactory score on placement examination.

*General Studies: MA***MAT 271 Calculus with Analytic Geometry II. (4)***fall, spring, summer*

Methods of integration, applications of calculus, elements of analytic geometry, improper integrals, sequences, and series. Not open to students with credit for MAT 291. The sequence MAT 270, 271, 272 may be substituted to satisfy requirements for MAT 290 and 291. Fee. Prerequisite with a grade of "C" (2.00) or higher: MAT 270 (or its equivalent).

*General Studies: MA***MAT 272 Calculus with Analytic Geometry III. (4)***fall, spring, summer*

Vector-valued functions of several variables, multiple integration, and introduction to vector analysis. The sequence MAT 270, 271, 272 may be substituted to satisfy requirements for MAT 290 and 291. Fee. Prerequisite with a grade of "C" (2.00) or higher: MAT 271 (or its equivalent).

*General Studies: MA***MAT 274 Elementary Differential Equations. (3)***fall and spring or summer*

Introduces ordinary differential equations, adapted to the needs of students in engineering and the sciences. Credit is allowed for only MAT

274 or 275 toward a mathematics degree. Prerequisites: MAT 271 (or its equivalent); MAT 272 (or its equivalent) recommended.

*General Studies: MA***MAT 275 Modern Differential Equations. (3)***fall and spring*

Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using Matlab. Credit is allowed for only MAT 275 or 274 toward a mathematics degree. Lecture, computing lab. Fee. Pre- or corequisite: MAT 271 (or its equivalent).

*General Studies: MA***MAT 290 Calculus I. (5)***selected semesters*

Differential and integral calculus of elementary functions; topics from analytic geometry essential to the study of calculus. Prerequisite: MAT 170 (or its equivalent).

*General Studies: MA***MAT 291 Calculus II. (5)***selected semesters*

Further applications of calculus, partial differentiation, multiple integrals, and infinite series. Prerequisite: MAT 290 (or its equivalent).

MAT 294 Special Topics. (1–4)*selected semesters***MAT 300 Mathematical Structures. (3)***fall and spring*

Logic and set theory, induction, functions, order and equivalence relations, cardinality. Emphasizes writing proofs. Prerequisite: 1 semester of calculus or instructor approval.

*General Studies: L***MAT 310 Introduction to Geometry. (3)***spring*

Congruence, area, parallelism, similarity and volume, and Euclidean and non-Euclidean geometry. Prerequisite: MAT 272 (or its equivalent).

MAT 340 Theory of Interest. (3)*fall and spring*

Compound interest, discount rates, annuities, present values, depreciation, and bond valuations. Prerequisites: MAT 243 (or 300 or instructor approval); 1 semester of calculus.

MAT 342 Linear Algebra. (3)*fall and spring or summer*

Linear equations, matrices, determinants, vector spaces, bases, linear transformations and similarity, inner product spaces, eigenvectors, orthonormal bases, diagonalization, and principal axes. Credit is allowed for only MAT 342 or 343 toward a mathematics degree. Pre- or corequisite: MAT 272 (or its equivalent).

MAT 343 Applied Linear Algebra. (3)*fall and spring*

Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using Matlab. Credit is allowed for only MAT 343 or 342 toward a mathematics degree. Lecture, computing lab. Fee. Prerequisite: MAT 271 (or its equivalent).

MAT 351 Mathematical Methods for Genetic Analysis. (3)*fall and spring*

Discrete mathematics, probability, statistics, and associated computer packages. Applications to genomics, bioinformatics, forensics, and DNA/protein sequence patterns. Fee. Prerequisite: MAT 251 or 270 or instructor approval.

*General Studies: CS***MAT 362 Advanced Mathematics for Engineers and Scientists. (3)***fall, spring, summer*

Vector analysis, Fourier analysis, and partial differential equations. Prerequisites: MAT 272 and 274 (or 275) (or their equivalents).

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

MAT 370 Intermediate Calculus. (3)

fall and spring

Theory behind basic 1-variable calculus: continuity, derivative, Riemann integral, sequences, and series. Not open to students who have received a "C" (2.00) or higher in MAT 371. Credit is allowed for only MAT 370 or 371 toward a mathematics degree. Prerequisites: MAT 272, 300.

MAT 371 Advanced Calculus I. (3)

fall and spring

Real numbers, completeness, sequences/series, continuity, uniform theorems, derivative, Riemann integral, pointwise/uniform convergence, Taylor's theorem. Credit is allowed for only MAT 371 or 370 toward a mathematics degree. Prerequisite: MAT 272 or 300 or instructor approval.

MAT 372 Advanced Calculus II. (3)

spring

Open, closed, compact sets in \mathbb{R}^n continuity, differentiation, partial differentiation, integration in \mathbb{R}^n . Inverse/implicit function theorems. Not open to students with credit for MAT 460. Prerequisite: MAT 371. Pre- or corequisite: MAT 342 or 343.

MAT 410 Introduction to General Topology. (3)

once a year

Topological spaces, metric spaces, compactness, connectedness, and product spaces. Prerequisite: MAT 300 or 371 or instructor approval.

MAT 415 Introduction to Combinatorics. (3)

fall

Topics include proof techniques, permutations, combinations; counting techniques, including recurrence relaxations, generating functions, inclusion-exclusion; Ramsey theory and combinatorial designs. Prerequisites: both MAT 300 (or 243) and 342 (or 242 or 343) or only instructor approval.

MAT 416 Introduction to Graph Theory. (3)

spring

Topics include trees, cycles, matchings, planarity, connectivity, hamiltonicity, colorings, graph algorithms, and other advanced topics. Prerequisites: both MAT 300 (or 243) and 342 (or 242 or 343) or only instructor approval.

MAT 419 Introduction to Linear Programming. (3)

spring

Simplex method, duality, and network flows. Applications to game theory, geometry, combinatorics, graph theory, and posets. Prerequisites: a combination of CSE 100 (or 200 or 210) and MAT 300 (or 243) and 342 (or 242 or 343) or only instructor approval.

General Studies: CS

MAT 420 Scientific Computing. (3)

fall

Surveys and applies programming languages, libraries, and scientific visualization tools. Programming assignments emphasize software development skills. Lecture, lab. Fee. Prerequisites: a combination of CSE 200 and MAT 274 (or 275) and 342 (or 343) (or their equivalents) or only instructor approval.

MAT 421 Applied Computational Methods. (3)

fall and spring

Numerical methods for quadrature, differential equations, roots of nonlinear equations, interpolation, approximation, linear equations, floating-point arithmetic, and roundoff error. Prerequisites: both MAT 271 (or its equivalent) and fluency in computer programming (preferably FORTRAN) or only instructor approval.

General Studies: CS

MAT 423 Numerical Analysis I. (3)

fall

Analysis and algorithms for numerical solutions linear/nonlinear equations, direct solvers, iterative procedures, optimization. Determination of eigenvalues. Elementary computer arithmetic. Prerequisites: both MAT 342 (or 343) and fluency in computer programming or only instructor approval.

General Studies: CS

MAT 425 Numerical Analysis II. (3)

spring

Analysis of and algorithms for numerical interpolation, integration, and differentiation. Numerical solution of ordinary differential equations, and method of lines. Those seeking a methods survey course should take MAT 421. Prerequisites: both MAT 274 (or 275) and fluency in

computer programming or only instructor approval. MAT 371 recommended.

General Studies: CS

MAT 427 Computer Arithmetic. (3)

selected semesters

Number systems, hardware/software arithmetic, overflow, significance, rounding, multiple precision, and automatic error control; impact on languages, architectures, robust programming, and software development. Prerequisite: only CSE 100 (or 200) or both MAT 421 and 423 (or 425) or only instructor approval.

General Studies: CS

MAT 442 Advanced Linear Algebra. (3)

fall

Fundamentals of linear algebra, dual spaces, invariant subspaces, canonical forms, bilinear and quadratic forms, and multilinear algebra. Prerequisites: both MAT 300 and 342 (or 343) or only instructor approval.

MAT 443 Introduction to Abstract Algebra. (3)

fall

Introduces concepts of abstract algebra. Not open to students with credit for MAT 444. Prerequisites: both MAT 300 and 342 (or 343) or only instructor approval.

MAT 444 Intermediate Abstract Algebra. (3)

spring

Basic theory of groups, rings, and fields, including an introduction to Galois theory. Appropriate as preparation for MAT 543. Prerequisite: MAT 443 or graduate standing or instructor approval.

MAT 445 Theory of Numbers. (3)

spring

Prime numbers, unique factorization theorem, congruences, Diophantine equations, primitive roots, and quadratic reciprocity theorem. Prerequisites: both MAT 300 and 342 (or 343) or only instructor approval.

MAT 447 Cryptography. (3)

fall and spring

Block ciphers, stream ciphers, congruence arithmetic, information theory, public key cryptosystems, key exchange, electronic signatures. Prerequisites: CSE 100 (or 110); MAT 242 (or 342 or 343), 300.

MAT 451 Mathematical Modeling. (3)

spring

Detailed study of 1 or more mathematical models that occur in the physical or biological sciences. May be repeated for credit with instructor approval. Prerequisites: both MAT 242 (or 342 or 343) and 274 (or 275) or only instructor approval.

General Studies: CS

MAT 452 Introduction to Chaos and Nonlinear Dynamics. (3)

fall

Properties of nonlinear dynamical systems; dependence on initial conditions; strange attractors; period doubling; bifurcations; symbolic dynamics; Smale-Birkhoff theorem; and applications. Prerequisites: MAT 274 (or 275), 342 (or 242 or 343); MAT 371 is recommended.

MAT 455 Introduction to Fractals and Applications. (3)

spring

Fractals; self-similar structures, fractals with iterated function systems of maps, computing fractals, fractal dimensions, chaotic dynamics on fractals, applications. Prerequisites: MAT 274 (or 275), 342 (or 242 or 343); MAT 371 recommended.

MAT 460 Vector Calculus. (3)

spring

Vectors, curvilinear coordinates, Jacobians, implicit function theorem, line and surface integrals, Green's, Stokes', and divergence theorems. Not open to students with credit for MAT 372. Prerequisites: MAT 242 (or 342 or 343), 272, 274 (or 275).

MAT 461 Applied Complex Analysis. (3)

fall and summer

Analytic functions, complex integration, Taylor and Laurent series, residue theorem, conformal mapping, and harmonic functions. Prerequisite: MAT 272 (or its equivalent).

MAT 462 Applied Partial Differential Equations. (3)

spring

Second-order partial differential equations, emphasizing Laplace, wave, and diffusion equations. Solutions by the methods of characteristics, separation of variables, and integral transforms. Prerequisites: MAT 242 (or 342 or 343), 274 (or 275).

MAT 472 Intermediate Real Analysis I. (3)*fall*

Introduces analysis in metric spaces with emphasis on the real line. Appropriate as preparation for MAT 570. Prerequisites: MAT 300, 342 (or 343).

MAT 473 Intermediate Real Analysis II. (3)*spring*

Analysis in \mathbb{R}^n : implicit function theorem, introduction to manifolds, Lebesgue integration, change of variables formula, convergence theorems for integrals. Prerequisite: MAT 472 or instructor approval.

MAT 475 Differential Equations. (3)*fall*

Linear and nonlinear ordinary differential equations, asymptotic behavior of solutions, stability, existence and uniqueness, limit sets, Poincaré-Bendixson theorem. Prerequisites: MAT 242 (or 342 or 343), 274 (or 275), 370 (or 371) (or their equivalents) or instructor approval.

MAT 476 Partial Differential Equations. (3)*spring*

First-order quasilinear, second-order linear (wave, Laplace, heat). Characteristics, harmonic functions, maximum principles, Fourier series, separation of variables. Prerequisites: MAT 242 (or 342 or 343), 274 (or 275 or 475), 370 (or 371) (or their equivalents) or instructor approval.

MAT 484 Internship. (1–12)*selected semesters***MAT 485 History of Mathematics. (3)***selected semesters*

Topics from the history of the origin and development of mathematical ideas. Prerequisite: MAT 272 (or its equivalent).

MAT 493 Honors Thesis/Research. (3)*selected semesters***MAT 494 Special Topics. (1–4)***selected semesters*

Topics may include the following:

- Independent Study/Research. (3)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

MATHEMATICS EDUCATION (MTE)**MTE 180 Theory of Elementary Mathematics. (3)***fall, spring, summer*

Number systems, intuitive geometry, elementary algebra, and measurement. Intended for prospective elementary school teachers. Prerequisites: MAT 113, 114 (or 117 or its equivalent).

MTE 181 Theory of Elementary Mathematics. (3)*once a year*

Continuation of MTE 180. Fee. Prerequisite: MTE 180 or instructor approval.

MTE 380 Arithmetic in the Elementary School. (3)*once a year*

Historical numeration systems, overview of elementary number theory, including primes, factorization, divisibility, bases, modular systems, linear congruence, and continued fractions. Prerequisite: MTE 181 or instructor approval.

MTE 381 Geometry in the Elementary School. (3)*selected semesters*

Informal geometry, including concepts of length, area, volume, similarity, and congruence. Classification of figures, straightedge and compass constructions, and motion geometry. Prerequisite: MTE 380 or instructor approval.

MTE 482 Methods of Teaching Mathematics in Secondary School. (3)*fall*

Examines secondary school curricular material and analyzes instructional devices. Teaching strategies, evaluative techniques, diagnosis, and remediation and problem solving. Fee. Prerequisite: instructor approval.

MTE 483 Mathematics in the Secondary School. (3)*spring*

Topics in geometry, number theory, algebra, and analysis. Emphasizes unifying principles. Prerequisite: MAT 310 or instructor approval.

MTE 484 Internship. (1–12)*selected semesters*

Topics may include the following:

- Theory of Elementary Mathematics Internship. (1–4)
fall and spring
Employs hands-on activities and manipulatives to advance mathematical understanding in second- to fourth-grade students.
- Service Learning
fall, spring, summer
Fee.

MTE 494 Special Topics. (1–4)*fall and spring*

Topics may include the following:

- Advanced Methods of Teaching Secondary Mathematics. (3)
Continuation of MTE 482. Prerequisite: MTE 482.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

STATISTICS AND PROBABILITY (STP)**STP 220 Conceptual Statistics. (3)***fall and spring*

Treats the concepts and vocabulary needed to evaluate statistical reports on health, technology, and society. Aggressively emphasizes understanding over computation. Lecture, teamwork. Prerequisites: MAT 113, 114 (or 117 or its equivalent).

*General Studies: CS***STP 226 Elements of Statistics. (3)***fall, spring, summer*

Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation. Not open to majors in mathematics or the physical sciences. Prerequisites: MAT 113, 114 (or 117 or its equivalent).

*General Studies: CS***STP 294 Special Topics. (1–4)***selected semesters*

Topics may include the following:

- Statistics for Biosciences. (3)

STP 326 Intermediate Probability. (3)*fall and spring*

Probability models and computations, joint and conditional distributions, moments, and families of distributions. Topics in stochastic processes, simulation, and statistics. Prerequisite: MAT 210 (or its equivalent).

*General Studies: CS***STP 420 Introductory Applied Statistics. (3)***fall, spring, summer*

Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests. Prerequisite: MAT 113 or 117 (or its equivalent).

*General Studies: CS***STP 421 Probability. (3)***fall*

Laws of probability, combinatorial analysis, random variables, probability distributions, expectations, moment-generating functions, transformations of random variables, and central limit theorem.

Prerequisite: MAT 272 (or its equivalent).

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

STP 425 Stochastic Processes. (3)

spring

Markov chains, stationary distributions, pure jump processes, 2-D order processes, and other topics in stochastic processes. Prerequisites: MAT 342; STP 421.

STP 427 Mathematical Statistics. (3)

spring

Limiting distributions, interval estimation, point estimation, sufficient statistics, and tests of hypotheses. Prerequisites: a combination of MAT 371 and STP 420 and 421 or only instructor approval.

STP 429 Experimental Statistics. (3)

spring

Statistical inference for controlled experimentation. Multiple regression, correlation, analysis of variance, multiple comparisons, and non-parametric procedures. Prerequisite: STP 420 (or its equivalent).

General Studies: CS

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

Department of Military Science

Army ROTC

www.asu.edu/clas/military

480/965-3318

SS 330

Major Herbert M. Chong, Chair

Professor: Chong

Assistant Professors: Caryl, Hopkins, Ramer, Rollins

Instructors: Fox, Ringenoldus, Suiter

PURPOSE

The Department of Military Science curriculum consists of the basic course (MIS 101, 102, 201, and 202) and the advanced course (MIS 301, 302, 401, and 402). The goal of this professional education curriculum is to prepare students with leadership potential to be commissioned as U.S. Army officers. Objectives include developing the following characteristics in students: leadership and managerial skills, the ability to think creatively, the ability to speak and write effectively, appreciation of the requirements for national security, and an understanding of the nature and functions of the U.S. Army. Upon successful completion of the advanced course and graduation, qualified students receive commissions in the Active Army (on a competitive basis), U.S. Army Reserve, or Army National Guard.

In addition to the military science curriculum, courses in the field of national defense studies are both an integral and parallel source of the department's program. Integrally, they provide MIS courses at all levels with topical intensity and highlight professionally related areas.

GENERAL QUALIFICATIONS

Basic Course. Any student who is enrolled in ASU (or approved by the professor of military science) can enter into military science basic classes. It is strongly recommended that the student be in good physical shape because some of the curriculum requires physical exertion.

Advanced Course. To be enrolled in the advanced course and compete for and obtain a commission in the U.S. Army, students must meet the following requirements:

1. be a citizen of the United States (noncitizens may enroll but must obtain citizenship before commissioning);
2. be of sound physical condition and pass the U.S. Army physical fitness test;
3. meet the required professional military educational requirements; and
4. be at least 17 years of age for entrance into the advanced course and be able to complete all commissioning requirements before age 27.

Only those students in the basic and advanced courses who meet the required standards according to military regulations are eligible to receive financial assistance through the U.S. Army. Faculty of the Department of Military Science are available during normal office hours to answer questions or provide counseling.

The following are various options open to students who wish to obtain a commission in the U.S. Army. Contact the Department of Military Science personnel for more information.

Four-Year Program. Students may enroll in Army ROTC during their freshman year. They take the basic course during the first two years, receiving a total of 12 semester hours of credit for four semesters of study. Upon satisfying the requirements and being approved for continuation by the department, they enter the advanced course, where they earn 12 additional semester hours for four semesters of study. Students are also required to attend a five-week National Advanced Leadership Camp (NALC) at Fort Lewis, Washington, between their junior and senior years. All commissioned officers must meet certain Professional Military Education requirements by completing courses in English, math, military history, and computer literacy. Selected majors such as nursing, engineering, and architecture, among others, may require an additional semester or two, or summer school, to complete all requirements for a degree and commission without excessive course overloads. Upon successful completion of the advanced course and requirements for a degree, students are commissioned as second lieutenants in the Active Duty Army, U.S. Army Reserve, or Army National Guard.

Two-Year Program. Students must have at least two academic years of college work remaining, either at the undergraduate or graduate level. The student must also have reached academic junior standing. This program is open to all students with the exception of three- and four-year Army ROTC scholarship winners (see "Scholarship Programs," page 423). Students seeking enrollment in the two-year

program should make application before the semester of the year in which they desire to enter the program. They must also pass the Army physical fitness test. After successfully completing a paid five-week Leaders Training Course (LTC), students may enroll in the advanced course. (The camp is conducted during June and July at Fort Knox, Kentucky.) Students who have previous military experience or who are currently members of the National Guard or Reserves may be admitted directly into the two-year program, provided they are academic juniors. They then follow the same program and meet the same requirements as stated for advanced course students in the four-year program.

Qualifications for Admittance to the Advanced Course. The following qualifications are required for admittance to the advanced course:

1. successful completion of the basic course for the students in the four-year ROTC program; for the students in the two-year program, selection for and completion of the six-week LTC or prior military service;
2. passing of the Army physical examination;
3. attainment of a minimum cumulative GPA of 2.00;
4. attainment of at least junior class standing; and
5. maintenance of full-time student status.

Pay and Allowances. Each advanced course student receives one-half the pay of a second lieutenant during attendance at the five-week NALC. Uniforms, housing, and meals are provided at camp without cost to the students, and they are reimbursed at the current mileage rate for travel to and from the camp. Students who attend LTC receive the pay of an army recruit during attendance at basic camp as well as the current mileage rate for travel to and from the camp. All students in the advanced course, regardless of scholarship status, are paid \$350 per month (junior year) and \$400 per month (senior year).

Simultaneous Membership Program. Under this program, ROTC students may simultaneously be members of the Army Reserves or the National Guard. The combination of advance course allowance and pay for Army Reserve or National Guard participation provides between \$550–\$1,000 per month.

Scholarship Programs. The Army ROTC offers scholarship programs to outstanding young men and women. These scholarships provide 100 percent tuition and fees. In addition, the scholarship pays \$250 per month (freshman year), \$300 per month (sophomore year), \$350 per month (junior year), and \$400 per month (senior year) subsistence allowance and \$350.00 each semester for textbooks and supplies. A scholarship for four years is available to freshmen who enter the four-year program. Applications must be submitted in accordance with a schedule furnished by high school counselors. Scholarships are also available for three- and two-year periods, commencing with the sophomore and junior years of ROTC respectively. Applications are open to all students in good standing with the university; previous ROTC or military experience is not required for application

for three- and two-year scholarships. Selection is made by a review board on campus. Acceptance of any of the three scholarship programs requires a service commitment to serve in the Active Army for a period of up to four years after commissioning and graduation.

Active Duty Requirements. Graduates of Army ROTC may serve as officers in the Active Army, Army National Guard, or Army Reserves. Active duty commitments may vary from four years to as little as three months. Scholarship students have up to a four-year active duty commitment.

Graduate and Professional Studies Programs. A delay of up to four years in call to active duty is available to outstanding students who desire to earn graduate or professional degrees. Special programs for graduate and professional studies are available to both active Army appointees and Reserve component appointees in the following areas: medicine, osteopathy, and clinical psychology.

MILITARY SCIENCE (MIS)

MIS 101 Introduction to the Military I. (3)

fall

Overview of mission, organization, and structure of the Army and its role in national defense; discussion of current military issues. 3 hours lecture/conference, 2 hours lab.

MIS 102 Introduction to the Military II. (3)

spring

Introduces problem-solving methods, critical thinking, decision making, and group cohesion as applied in a military environment. 3 hours lecture/conference, 2 hours lab. Prerequisite: MIS 101.

MIS 201 Introduction to Leadership Dynamics I. (3)

fall

Introduces interpersonal dynamics involved in military team operations; theory and application of military leadership principles. 3 hours lecture/conference, 2 hours lab.

MIS 202 Introduction to Leadership Dynamics II. (3)

spring

Continuation of MIS 201. 3 hours lecture/conference, 2 hours lab. Prerequisite: MIS 201.

MIS 205 Leader's Training Course. (4)

summer

6-week training program emphasizing practical hands-on skills and leadership development. Taken in lieu of MIS 101, 102, 201, 202. Conducted at Fort Knox, Kentucky.

MIS 301 Advanced Military Science I. (3)

fall

Theory and dynamics of the individual soldier and military units in offensive combat operations. 3 hours lecture/conference, 2 hours Leadership Practical Application, 1 2-day field exercise. Fee. Prerequisites: MIS 101 and 102 and 201 and 202 (or their equivalents).

MIS 302 Advanced Military Science II. (3)

spring

Theory and dynamics of military units in defensive combat operations. 3 hours lecture/conference, 2 hours Leadership Practical Application, 1 2-day field exercise. Fee. Prerequisites: MIS 101 and 102 and 201 and 202 (or their equivalents).

MIS 303 National Advanced Leadership Camp. (4)

summer

6-week training program emphasizing leadership development and advanced military skills, including tactics, land navigation, and physical training. Conducted at Fort Lewis, Washington. Prerequisites: MIS 301, 302.

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

MIS 401 Advanced Military Science III. (3)

fall

Military legal system; preparation and conduct of military training; leadership development; ethics and professionalism of the military officer. 3 hours lecture/conference, 2 hours Leadership Practical Application, 1 2-day field exercise. Fee. Prerequisites: MIS 301, 302.

MIS 402 Advanced Military Science IV. (3)

spring

Military correspondence; career planning and personal affairs in service; conduct of training; leadership development; ethics and professionalism of the military officer. 3 hours lecture/conference, 2 hours Leadership Practical Application, 1 2-day field exercise. Fee. Prerequisites: MIS 301, 302.

MIS 410 American Defense Policy I. (3)

fall

Evolution, organization, and execution of U.S. national security policy. *General Studies: SB*

MIS 412 American Defense Policy II. (3)

spring

Contemporary problems and analytical issues in the formation and implementation of U.S. national security. Prerequisite: MIS 410. *General Studies: SB*

MIS 499 Individualized Instruction: Military Science Leadership. (1-3)

selected semesters

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

PHI 312 Theory of Knowledge *HU*.....3
 or PHI 314 Philosophy of Science *HU* (3)

PHI 316 Metaphysics *HU*.....3
 or PHI 317 Philosophy of Mind *HU* (3)

PHI 333 Introduction to Symbolic Logic3

Choose two courses below6

PHI 401 Rationalism (3)

PHI 402 Empiricism *HU* (3)

PHI 403 Contemporary Analytic Philosophy *HU* (3)

PHI 413 Advanced Symbolic Logic (3)

PHI 420 Topics in Philosophy (3)

PHI 494 Special Topics (3)

Total27

Exceptions are granted by special permission of the chair only. PHI 420 may be repeated for credit.

Students planning to do graduate work in philosophy should consult with an advisor to develop an appropriate selection of courses at the 300 and 400 levels. A minimum grade of "C" (2.00) is necessary for each course used to fulfill the major requirements. See "College Degree Requirements," page 318.

History and Philosophy of Science. The faculty in the Department of Philosophy offer courses bearing the HPS prefix. With the consent of the director of undergraduate studies, these courses may be taken to satisfy the requirements of the Philosophy major.

MINOR IN PHILOSOPHY

A minor in Philosophy consists of 18 semester hours, of which at least 12 must be in the upper division and approved by an advisor in the department. All courses must be passed with a minimum grade of "C" (2.00).

CERTIFICATE IN ETHICS

The Ethics Certificate consists of 18 semester hours approved by an advisor in the department. The student must take PHI 305 or 335. At least 15 hours must be chosen from PHI 105, 304, 305, 306, 307, 309, 310, 335, and (when its topic is within ethics) PHI 420. One course outside this list, and perhaps outside the department, may be used with written approval from the director of Undergraduate Studies. All courses must be passed with a minimum grade of "C" (2.00).

CERTIFICATE IN SYMBOLIC SYSTEMS

The Certificate in Symbolic Systems consists of 28 semester hours approved by an advisor in the Department of Philosophy and divided evenly among computer science and engineering, psychology, and philosophy as follows:

1. CSE 200, 210, and 240;
2. PSY 230 and 290 and either PSY 323, 324, or 437; and
3. either PHI 312 or 314, either PHI 315 or 317, and either PHI 319 or 333.

Students must satisfy the prerequisites for the listed courses. With written approval from the director of undergraduate studies in the Department of Philosophy, one substitution of a course from outside this list may be made. All

Department of Philosophy

www.asu.edu/philosophy

480/965-3394

COOR 3307

Steven L. Reynolds, Interim Chair

Regents' Professor: Murphy

Professors: Cohen, Creath, Fitch, French, Humphrey, White

Associate Professors: Armendt, Blackson, de Marneffe, Guleserian, Kobes, McGregor, Reynolds

Assistant Professor: Devlin

Senior Lecturer: Bolton

PHILOSOPHY—B.A.

The major in Philosophy consists of 45 semester hours, 33 of which must be upper-division hours. In addition to the 45 semester hours, the mathematics proficiency requirement must be met by completing MAT 117 or higher. In exceptional cases, up to nine semester hours may be in related fields as approved by the undergraduate advisor. Required courses are as follows:

PHI 300 Philosophical Argument and Exposition *L*3

PHI 301 History of Ancient Philosophy *HU, H*3

PHI 302 History of Modern Philosophy *HU, H*3

PHI 305 Ethical Theory *HU*3
 or PHI 335 History of Ethics *HU* (3)

courses must be passed with a minimum grade of “C” (2.00).

B.I.S. CONCENTRATIONS

Concentrations in ethics and philosophy (with options in history and philosophy of science, and symbolic systems) are available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Students may also choose a concentration from any approved certificate program. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see “Bachelor of Interdisciplinary Studies,” page 123.

GRADUATE PROGRAM

The faculty in the Department of Philosophy offer a graduate program leading to the M.A. and Ph.D. degrees. See the *Graduate Catalog* for requirements.

PHILOSOPHY (PHI)

PHI 101 Introduction to Philosophy. (3)

fall, spring, summer

Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.

General Studies: HU

PHI 103 Principles of Sound Reasoning. (3)

fall, spring, summer

Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method. Prerequisite: ENG 101 or 105.

General Studies: L/HU

PHI 105 Introduction to Ethics. (3)

once a year

Philosophical examination of such questions as, How should we live? Is morality a social invention? Does anything matter?

General Studies: HU

PHI 300 Philosophical Argument and Exposition. (3)

spring

Develops techniques of philosophical argument and exposition. Frequent written exercises. Course content may vary with instructor. Prerequisites: major; instructor approval.

General Studies: L

PHI 301 History of Ancient Philosophy. (3)

fall

History of Western philosophy from its beginnings through the Hellenistic period.

General Studies: HU, H

PHI 302 History of Modern Philosophy. (3)

spring

History of Western philosophy from the Renaissance through Kant.

General Studies: HU, H

PHI 304 Existentialism. (3)

selected semesters

Covers such topics as absurdity, authenticity, the meaning of life and death, responsibility, and subjectivity. May include readings in phenomenology.

General Studies: HU

PHI 305 Ethical Theory. (3)

once a year

Current theories about the nature of morality (metaethics) and about what is right and wrong (normative ethics). Prerequisite: PHI 105 or 306 or 307 or 309 or 335 or instructor approval.

General Studies: HU

PHI 306 Applied Ethics. (3)

fall, spring, summer

Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.

General Studies: HU

PHI 307 Philosophy of Law. (3)

once a year

Nature and source of law and its relation to morality. Legal rights, legal enforcement of morals, civil disobedience, liability and responsibility, punishment, judicial reasoning, justice, property, and differences between theories of natural and positive law.

General Studies: HU

PHI 308 Philosophy of Art. (3)

once a year

Central problems in philosophy of art, e.g., the nature of a work of art, modern and traditional theories of art, aesthetic perception and experience, and objectivity and relativity in art criticism.

General Studies: HU

PHI 309 Social and Political Philosophy. (3)

once a year

Alternative principles and methods relevant to problems of human association and conflict; discusses justice and power, freedom and equality, and autonomy and order. Prerequisite: PHI 105 or 305 or 335 or instructor approval.

General Studies: HU

PHI 310 Environmental Ethics. (3)

once a year

Examines a full range of philosophical positions pertaining to our moral relationship to the natural world; anthropocentrism, individualism, biocentrism.

General Studies: HU

PHI 311 Philosophy in Literature. (3)

once a year

Selected works of literature introducing philosophical problems such as the nature of moral goodness and people's relation to the world and other people.

General Studies: HU

PHI 312 Theory of Knowledge. (3)

once a year

Nature, sources, and limits of human knowledge. Topics may include truth, a priori knowledge, empirical knowledge, perception, induction, and skepticism. Prerequisite: PHI 101 or 103 or 300 or 301 or 302 or 333.

General Studies: HU

PHI 314 Philosophy of Science. (3)

once a year

Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation. Cross-listed as HPS 314. Credit is allowed for only HPS 314 or PHI 314.

General Studies: HU

PHI 315 Philosophy of Language. (3)

once a year

Problems pertaining to the nature of language, including meaning, reference, truth, definition, analyticity, translatability, synonymy, and contributions of contemporary linguistics. Prerequisite: PHI 103 or 300 or 333.

General Studies: HU

PHI 316 Metaphysics. (3)

once a year

Problems pertaining to the nature of reality. Topics may include nature of person, minds, substance, universals, space, time, causation, and modality. Prerequisite: PHI 101 or 103 or 300 or 301 or 333.

General Studies: HU

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See “General Studies,” page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

PHI 317 Philosophy of Mind. (3)

once a year

Nature of consciousness. Common sense view of mind, behaviorism, materialism, dualism, functionalism, self-knowledge, and knowledge of other minds. Prerequisite: PHI 101 or 103 or 300 or 301 or 302 or 333.

General Studies: HU

PHI 318 Philosophy of Religion. (3)

once a year

Classical arguments for the existence of God. Argument from evil against the existence of God. Justification of religious belief.

General Studies: HU

PHI 319 Philosophy of Computing. (3)

selected semesters

Philosophical problems surrounding the theory of computation. Turing machines, mind and AI, neural network computing, ethics, and epistemology of computing. Lecture, lab, discussion.

General Studies: CS/HU

PHI 320 Bioethics. (3)

once a year

Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.

PHI 325 Philosophy of Social Science. (3)

selected semesters

Philosophical problems surrounding the aims, structure, and methods of the social sciences.

General Studies: HU/SB

PHI 332 19th-Century Philosophy. (3)

selected semesters

History of 19th-century philosophical thought, emphasizing either the German or the British traditions. Prerequisite: PHI 302.

General Studies: HU

PHI 333 Introduction to Symbolic Logic. (3)

once a year

Symbolic techniques, emphasizing deductions and proofs in the propositional and 1st-order predicate calculi.

PHI 335 History of Ethics. (3)

once a year

Major works of moral philosophy, both ancient and modern, such as those by Plato, Aristotle, Hobbes, Hume, Kant, and Mill. Prerequisite: PHI 101 or 105 or 305 or 306 or 307 or 309 or instructor approval.

General Studies: HU

PHI 401 Rationalism. (3)

selected semesters

Examines classical philosophical rationalism, as in Descartes, Spinoza, Malebranche, or Leibniz. Contemporary rationalist thought may also be examined. Prerequisites: PHI 302 and 305 (or 309 or 312 or 316 or 317).

PHI 402 Empiricism. (3)

selected semesters

Examines representatives of either classical or contemporary philosophical empiricism, e.g., Bacon, Hobbes, Locke, Butler, Berkeley, Reid, Hume, Mill, Carnap, and Ayer. Prerequisites: PHI 302 and 305 (or 309 or 312 or 316 or 317).

General Studies: HU

PHI 403 Contemporary Analytic Philosophy. (3)

once a year

Aims and methods of such 20th-century philosophers as Frege, Moore, Russell, Wittgenstein, Carnap, Ayer, Wisdom, Ryle, Austin, Strawson, Quine, and Sellars, with application to metaphysics and epistemology. Prerequisites: PHI 302 and 312 (or 314 or 315 or 316 or 317 or 401 or 402).

General Studies: HU

PHI 413 Advanced Symbolic Logic. (3)

selected semesters

Properties of formal systems axiomatizing propositional and 1st-order predicate logic. May also include modal logic, number theory, and limits of logicism. Prerequisite: PHI 333.

PHI 420 Topics in Philosophy. (3)

once a year

Course descriptions on file in department. May be repeated for credit. Topics may include the following:

- History of Philosophy

- Metaphysics/Epistemology
- Philosophy of Language/Logic
- Philosophy of Science
- Value Theory

Prerequisite: a relevant upper-division PHI course or instructor approval.

PHI 494 Special Topics. (3)

selected semesters

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

Department of Physics and Astronomy

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PS F470

Barry G. Ritchie, Chair

Regents' Professors: Smith, Spence, Starrfield

Professors: Alarcon, Bauer, Bennett, Burstein, Chamberlin, Comfort, Cowley, Doak, Dow, Hester, Lindsay, Menéndez, Ponce, Rez, Ritchie, Sankey, Schmidt, Tillery, Treacy, Tsen, Tsong, Venables, Windhorst

Associate Professors: Culbertson, Drucker, Herbots, Marzke, Morse, Newman

Assistant Professors: Desch, Lebed, Ortiz, Shumway

PHYSICS—B.S.

Students majoring in Physics may pursue one of two options.

Option I. Designed for students who wish to pursue physics at the bachelor or graduate degree levels, option I consists of the following required courses:

Choose between the course combinations below.....4

PHY 150 Physics I *SQ* (4)

— or —

PHY 121 University Physics I: Mechanics *SQ*¹ (3)

PHY 122 University Physics Laboratory I *SQ*¹ (1)

Choose between the course combinations below.....4

PHY 151 Physics II *SQ* (4)

— or —

PHY 131 University Physics II: Electricity and Magnetism *SQ*² (3)

PHY 132 University Physics Laboratory II *SQ*² (1)

PHY 201 Mathematical Methods in Physics I *CS*3

PHY 252 Physics III *SQ*4

PHY 302 Mathematical Methods in Physics II.....2

PHY 310 Classical Particles, Fields, and Matter I.....3

PHY 311 Classical Particles, Fields, and Matter II3

DEPARTMENT OF PHYSICS AND ASTRONOMY

PHY 314 Quantum Physics I.....	3
PHY 315 Quantum Physics II.....	3
PHY 333 Electronic Circuits and Measurements.....	3
PHY 334 Advanced Laboratory I L.....	2
PHY 412 Classical Particles, Fields, and Matter III.....	3
PHY 416 Quantum Physics III.....	3
PHY 441 Statistical and Thermal Physics I.....	3
PHY 465 Advanced Laboratory II.....	2
Total.....	<u>45</u>

¹ Both PHY 121 and 122 must be taken to secure SQ credit.

² Both PHY 131 and 132 must be taken to secure SQ credit.

Supporting mathematics courses are as follows:

Choose between the course combinations below..... 12 or 10

MAT 270 Calculus with Analytic Geometry I MA (4)

MAT 271 Calculus with Analytic Geometry II MA (4)

MAT 272 Calculus with Analytic Geometry III MA (4)

— or —

MAT 290 Calculus I MA (5)

MAT 291 Calculus II (5)

Additional courses in physics and related fields are selected with the approval of the advisor. French, German, or Russian is strongly recommended to fulfill the foreign language requirement.

Option II. The interdisciplinary option II is designed for students who wish to obtain an undergraduate physics preparation for entry into other professions or graduate programs. A total of 53 hours are required, including the following courses:

Choose between the course combinations below.....4

PHY 150 Physics I SQ (4)

— or —

PHY 121 University Physics I: Mechanics SQ¹ (3)

PHY 122 University Physics Laboratory I SQ¹ (1)

Choose between the course combinations below.....4

PHY 151 Physics II SQ (4)

— or —

PHY 131 University Physics II: Electricity and Magnetism SQ² (3)

PHY 132 University Physics Laboratory II SQ² (1)

PHY 201 Mathematical Methods in Physics I CS.....3

PHY 252 Physics III SQ.....4

PHY 302 Mathematical Methods in Physics II.....2

PHY 310 Classical Particles, Fields, and Matter I.....3

PHY 311 Classical Particles, Fields, and Matter II.....3

PHY 314 Quantum Physics I.....3

PHY 315 Quantum Physics II.....3

PHY 333 Electronic Circuits and Measurements.....3

PHY 334 Advanced Laboratory I L.....2

PHY 412 Classical Particles, Fields, and Matter III.....3

PHY 441 Statistical and Thermal Physics I.....3

Total.....40

¹ Both PHY 121 and 122 must be taken to secure SQ credit.

² Both PHY 131 and 132 must be taken to secure SQ credit.

The remaining courses are selected from physics and an area of concentration as approved by the student's advisor. Possible areas of concentration are astronomy, astrophysics, materials science, physical chemistry, applied mathematics, geophysics, biological physics, philosophy of science, sci-

entific journalism, and premedical and prelaw programs. French, German, or Russian is strongly recommended to fulfill the foreign language requirement.

Supporting mathematics courses are as follows:

Choose between the course combinations below..... 12 or 10

MAT 270 Calculus with Analytic Geometry I MA (4)

MAT 271 Calculus with Analytic Geometry II MA (4)

MAT 272 Calculus with Analytic Geometry III MA (4)

— or —

MAT 290 Calculus I MA (5)

MAT 291 Calculus II (5)

Emphasis in Astronomy

The astronomy faculty offer courses in astronomy both for nonscience majors and for science and physics majors. For an emphasis in astronomy, the following courses (or their equivalents) should be taken:

AST 321 Introduction to Planetary and Stellar Astrophysics SQ¹.....3

AST 322 Introduction to Galactic and Extragalactic Astrophysics SQ².....3

AST 421 Astrophysics I.....3

AST 422 Astrophysics II.....3

AST 499 Individualized Instruction.....3

Total.....15

¹ Both AST 113 and 321 must be taken to secure SQ credit.

² Both AST 114 and 322 must be taken to secure SQ credit.

MINOR IN ASTRONOMY

The minor in Astronomy consists of a minimum of 24 semester hours. Required courses are as follows:

AST 113 Astronomy Laboratory I SQ¹.....1

AST 114 Astronomy Laboratory II SQ².....1

AST 321 Introduction to Planetary and Stellar Astrophysics SQ¹.....3

AST 322 Introduction to Galactic and Extragalactic Astrophysics SQ².....3

Choose between the course combinations below.....4

PHY 150 Physics I SQ (4)

— or —

PHY 121 University Physics I: Mechanics SQ³ (3)

PHY 122 University Physics Laboratory I SQ³ (1)

Choose between the course combinations below.....4

PHY 151 Physics II SQ (4)

— or —

PHY 131 University Physics II: Electricity and Magnetism SQ⁴ (3)

PHY 132 University Physics Laboratory II SQ⁴ (1)

PHY 252 Physics III SQ.....4

Approved upper-division electives.....4

Total.....24

¹ Both AST 113 and 321 must be taken to secure SQ credit.

² Both AST 114 and 322 must be taken to secure SQ credit.

³ Both PHY 121 and 122 must be taken to secure SQ credit.

⁴ Both PHY 131 and 132 must be taken to secure SQ credit.

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

Electives are chosen with the approval of an astronomy advisor from upper-division courses in physics and astronomy.

MINOR IN PHYSICS

The minor in Physics consists of a minimum of 29 semester hours. Required courses are as follows:

Choose between the course combinations below.....	4
PHY 150 Physics I <i>SQ</i> (4)	
— or —	
PHY 121 University Physics I: Mechanics <i>SQ</i> ¹ (3)	
PHY 122 University Physics Laboratory I <i>SQ</i> ¹ (1)	
Choose between the course combinations below.....	4
PHY 151 Physics II <i>SQ</i> (4)	
— or —	
PHY 131 University Physics II: Electricity and Magnetism <i>SQ</i> ² (3)	
PHY 132 University Physics Laboratory II <i>SQ</i> ² (1)	
PHY 201 Mathematical Methods in Physics I <i>CS</i>	3
PHY 252 Physics III <i>SQ</i>	4
PHY 302 Mathematical Methods in Physics II.....	2
PHY 310 Classical Particles, Fields, and Matter I.....	3
PHY 311 Classical Particles, Fields, and Matter II.....	3
PHY 314 Quantum Physics I.....	3
Approved electives.....	3
Total.....	29

¹ Both PHY 121 and 122 must be taken to secure *SQ* credit.

² Both PHY 131 and 132 must be taken to secure *SQ* credit.

Electives are chosen with the approval of the physics advisor from upper-division courses in physics and astronomy.

B.I.S. CONCENTRATIONS

Concentrations in astronomy and physics are available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 123.

SECONDARY EDUCATION—B.A.E.

Physics. This degree is offered through the Initial Teacher Certification program in the College of Education. Students pursuing a major in Secondary Education have an advisor in the College of Education and an advisor within the department of their academic specialization area.

See "College of Education," page 189, for information on admission eligibility requirements, admission deadlines, field experiences, and student teaching. For more information, or to schedule an appointment with an advisor, call the Office of Student Services in the College of Education at 480/965-5555.

The following courses must be completed with a "C" (2.00) or higher *before* applying to the ITC program: PHY 150 and 151 or PHY 121, 122, 131, and 132; and PHY 252.

The major teaching field consists of 42 semester hours. Required courses are as follows:

MAT 270 Calculus with Analytic Geometry I <i>MA</i>	4
MAT 271 Calculus with Analytic Geometry II <i>MA</i>	4
MAT 272 Calculus with Analytic Geometry III <i>MA</i>	4
Choose between the course combinations below.....	8
PHY 150 Physics I <i>SQ</i> (4)	
PHY 151 Physics II <i>SQ</i> (4)	
— or —	
PHY 121 University Physics I: Mechanics <i>SQ</i> ¹ (3)	
PHY 122 University Physics Laboratory I <i>SQ</i> ¹ (1)	
PHY 131 University Physics II: Electricity and Magnetism <i>SQ</i> ² (3)	
PHY 132 University Physics Laboratory II <i>SQ</i> ² (1)	
PHY 201 Mathematical Methods in Physics I <i>CS</i>	3
PHY 252 Physics III <i>SQ</i>	4
PHY 302 Mathematical Methods in Physics II.....	2
PHY 310 Classical Particles, Fields, and Matter I.....	3
PHY 333 Electronic Circuits and Measurements.....	3
PHY 361 Introductory Modern Physics.....	3
or PHY 314 Quantum Physics I (3)	
PHY 480 Methods of Teaching Physics.....	3
or PHY 484 Internship: Physics Teaching (1–4)	
Approved electives ³	10
Total.....	48

¹ Both PHY 121 and 122 must be taken to secure *SQ* credit.

² Both PHY 131 and 132 must be taken to secure *SQ* credit.

³ Electives are chosen in physics or other closely related fields, subject to the approval of the advisor.

Teaching Methods

PHY 480 Methods of Teaching Physics.....	3
PHY 484 Internship.....	3
Total.....	6

Minor Teaching Field. The minor teaching field consists of 24 semester hours. Required courses are as follows:

Choose between the course combinations below.....	8
PHY 150 Physics I <i>SQ</i> (4)	
PHY 151 Physics II <i>SQ</i> (4)	
— or —	
PHY 121 University Physics I: Mechanics <i>SQ</i> ¹ (3)	
PHY 122 University Physics Laboratory I <i>SQ</i> ¹ (1)	
PHY 131 University Physics II: Electricity and Magnetism <i>SQ</i> ² (3)	
PHY 132 University Physics Laboratory II <i>SQ</i> ² (1)	
PHY 201 Mathematical Methods in Physics I <i>CS</i>	3
PHY 252 Physics III <i>SQ</i>	4
PHY 314 Quantum Physics I.....	3
or PHY 361 Introductory Modern Physics (3)	
PHY 480 Methods of Teaching Physics.....	3
or PHY 484 Internship: Physics Teaching (1–4)	
Approved elective ³	3
Total.....	24

¹ Both PHY 121 and 122 must be taken to secure *SQ* credit.

² Both PHY 131 and 132 must be taken to secure *SQ* credit.

³ Electives are chosen in physics or other closely related fields, subject to the approval of the advisor.

GRADUATE PROGRAMS

The faculty in the Department of Physics and Astronomy offer programs leading to the degrees of Master of Natural

Science, M.S., and Ph.D. See the *Graduate Catalog* for requirements.

ASTRONOMY (AST)

AST 111 Introduction to Solar Systems Astronomy. (3)

fall

History, properties of light, instruments, study of solar system and nearby stars. For nonscience majors. Optional lab (AST 113).

General Studies: SQ (if credit also earned in AST 113)

AST 112 Introduction to Stars, Galaxies, and Cosmology. (3)

spring

Structure and evolution of stars, star clusters, galaxies, cosmology. For nonscience majors. Optional lab (AST 114).

General Studies: SQ (if credit also earned in AST 114)

AST 113 Astronomy Laboratory I. (1)

fall

Astronomical observations and experiments designed to increase familiarity with the sky, telescopes, and astronomical measurements. 2.5 hours lab. Pre- or corequisites: AST 111 (or 321); a working knowledge of high school algebra and geometry.

General Studies: SQ (if credit also earned in AST 111 or 321)

AST 114 Astronomy Laboratory II. (1)

spring

Similar to AST 113, but material chosen to supplement AST 112 and 322. 2.5 hours lab. Pre- or corequisites: AST 112 (or 322); a working knowledge of high school algebra and geometry.

General Studies: SQ (if credit also earned in AST 112 or 322)

AST 321 Introduction to Planetary and Stellar Astrophysics. (3)

fall

Physical laws; celestial mechanics; properties of planets, the sun, and other stars; formation and evolution of stars and planetary systems.

Prerequisites: MAT 270 (or 290); PHY 150.

General Studies: SQ (if credit also earned in AST 113)

AST 322 Introduction to Galactic and Extragalactic Astrophysics. (3)

spring

Evolved stars, introduction to relativity, galaxies and interstellar matter, structure and dynamics of galaxies, cosmology. Prerequisite: AST 321 or instructor approval.

General Studies: SQ (if credit also earned in AST 114)

AST 421 Astrophysics I. (3)

fall

Selected astrophysical topics, including stellar evolution, star formation, interstellar medium, galactic structure, extragalactic astronomy, high-energy astrophysics, and cosmology. Prerequisites: AST 321, 322; PHY 311, 314.

AST 422 Astrophysics II. (3)

spring

Same range of astrophysical topics as for AST 421 but different specific topics are emphasized in a given year. Prerequisites: AST 321, 322; PHY 311, 314.

AST 499 Individualized Instruction. (3)

selected semesters

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

PHYSICAL SCIENCES (PHS)

PHS 110 Fundamentals of Physical Science. (4)

fall and spring

One-semester survey of the principles of physics and chemistry. Presumes understanding of elementary algebra. 3 hours lecture, 2 hours lab.

General Studies: SQ

PHS 208 Patterns in Nature. (4)

fall and spring

Project-oriented science course with computer training to develop critical thinking and technical skills for student-oriented K–12 science lessons. Lecture, lab. Cross-listed as STE 208. Credit is allowed for only PHS 208 or STE 208. Fee. Prerequisite: a college-level course in science or instructor approval.

General Studies: SQ

PHS 484 Internship. (1–12)

selected semesters

Topics may include the following:

- Physical Science Internship. (3)

fall and spring

Applies scientific concepts discussed and demonstrated in PHS 208 to teach middle school students. Focuses on hands-on experience.

- Service Learning

fall, spring, summer

Fee.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

PHYSICS (PHY)

PHY 101 Introduction to Physics. (4)

fall and spring

Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra. 3 hours lecture, 1 recitation, 2 hours lab.

General Studies: SQ

PHY 105 Basic Physics. (3)

fall

One-semester survey of the principles of physics. Primarily for students who intend to take PHY 121, 131 but have not taken high school physics. 3 hours lecture, 1 recitation. Prerequisites: algebra and trigonometry.

PHY 111 General Physics. (3)

fall, spring, summer

Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a laboratory course must also register for PHY 113. 3 hours lecture, 1 recitation. Prerequisite: trigonometry.

General Studies: SQ (if credit also earned in PHY 113)

PHY 112 General Physics. (3)

fall, spring, summer

Continuation of PHY 111. Students whose curricula require a laboratory course must also register for PHY 114. Prerequisite: PHY 111.

General Studies: SQ (if credit also earned in PHY 114)

PHY 113 General Physics Laboratory. (1)

fall, spring, summer

Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to, PHY 111. 2 hours lab.

General Studies: SQ (if credit also earned in PHY 111)

PHY 114 General Physics Laboratory. (1)

fall, spring, summer

See PHY 113. May be taken concurrently with, or subsequent to, PHY 112.

General Studies: SQ (if credit also earned in PHY 112)

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

PHY 121 University Physics I: Mechanics. (3)

fall, spring, summer

Kinematics; Newton's laws; work, energy, momentum, conservation laws; dynamics of particles, solids, and fluids. 3 hours lecture, 1 hour recitation. Prerequisite: MAT 270 or 290 or instructor approval.

General Studies: SQ (if credit also earned in PHY 122)

PHY 122 University Physics Laboratory I. (1)

fall, spring, summer

Lab accompanying PHY 121. Pre- or corequisite: PHY 121.

General Studies: SQ (if credit also earned in PHY 121)

PHY 131 University Physics II: Electricity and Magnetism. (3)

fall, spring, summer

Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. 3 hours lecture, 1 hour recitation. Prerequisites: MAT 271 (or 291 or instructor approval); PHY 121. Corequisite: MAT 272 or instructor approval.

General Studies: SQ (if credit also earned in PHY 132)

PHY 132 University Physics Laboratory II. (1)

spring and summer

Lab accompanying PHY 131. Pre- or corequisite: PHY 131.

General Studies: SQ (if credit also earned in PHY 131)

PHY 150 Physics I. (4)

spring

Introductory physics for majors. Kinematics, Newton's Laws, basic forces, energy, momentum, special relativity. 3 hours lecture, 3 hours lab. Prerequisite: MAT 270 or 290 (or its equivalent).

General Studies: SQ

PHY 151 Physics II. (4)

fall

Continuation of PHY 150. Electromagnetic fields; Ampere's and Faraday's Laws; Maxwell's equations; basic circuit elements. 3 hours lecture, 3 hours lab. Prerequisites: MAT 271 (or 291 or its equivalent); PHY 121, 122 (or 150).

General Studies: SQ

PHY 190 Seminar: Physics as a Curriculum and a Profession. (1)

fall and spring

Seminar for new Physics majors. Instruction and information on curriculum, departmental functions, and professional preparation. Weekly meetings and excursions. Pass/fail grading.

PHY 201 Mathematical Methods in Physics I. (3)

spring

Differential equations, linear equations, vectors, matrices, Fourier series, and numerical methods. 2 hours lecture, 2 hours lab. Prerequisites: MAT 272; Physics major. Corequisite: PHY 252.

General Studies: CS

PHY 241 University Physics III. (3)

fall and spring

Thermodynamics, kinetic theory, physical and wave optics, relativity, photons, matter waves, atomic physics. 3 hours lecture, 1 hour recitation. Prerequisites: PHY 131; nonmajor.

PHY 252 Physics III. (4)

spring

Continuation of PHY 151. Wave physics, oscillations, harmonic systems, physical optics, thermodynamics, kinetic theory. 3 hours lecture, 3 hours lab. Prerequisites: MAT 272 (or its equivalent); PHY 131 and 132 (or 151 or its equivalent). Corequisite: PHY 201.

General Studies: SQ

PHY 302 Mathematical Methods in Physics II. (2)

fall

Continuation of PHY 201. Vector calculus, complex variables, partial differential equations, special functions, numerical methods. 1 hour lecture, 3 hours lab. Prerequisite: PHY 201 (or its equivalent).

PHY 310 Classical Particles, Fields, and Matter I. (3)

fall

Particle kinematics, mechanics, conservation laws, particle motion in force fields, dynamics of two-body systems, reference frames, rigid body motion, relativity. Corequisites: both PHY 302 and 314 or only instructor approval.

PHY 311 Classical Particles, Fields, and Matter II. (3)

spring

Electrostatic and gravitational fields, Poisson and Laplace equations, dielectric materials, magnetic fields and materials, magnetic induction,

Faraday's Law. Prerequisites: PHY 302, 310. Corequisite: PHY 315 or instructor approval.

PHY 314 Quantum Physics I. (3)

fall

Photons, models of the atom, wave properties of matter, introduction to wave mechanics, 1-D systems in quantum mechanics. Prerequisites: PHY 201 and 252 (or their equivalents). Corequisites: both PHY 302 and 310 or only instructor approval.

PHY 315 Quantum Physics II. (3)

spring

General principles of quantum mechanics, 3-D problems, approximation methods, spin, introduction to many-particle systems. Prerequisites: PHY 302, 310, 314. Corequisite: PHY 311 or instructor approval.

PHY 333 Electronic Circuits and Measurements. (3)

fall and spring

Basic principles of electronic circuit analysis and measurement techniques using modern instrumentation and computer-aided analysis of data. 1 hour lecture, 3 hours lab; required equivalent effort outside of lab. Corequisite: PHY 201 or instructor approval.

PHY 334 Advanced Laboratory I. (2)

spring

Selected experiments from contemporary physics. Emphasizes modern instrumentation, computer-assisted acquisition and analysis of data, and report form writing. Lecture, lab. Prerequisites: PHY 310, 314, 333.

General Studies: L (if credit also earned in PHY 420)

PHY 361 Introductory Modern Physics. (3)

fall and spring

Special relativity and introductory quantum theory with applications drawn from atomic, nuclear, and solid-state physics. 3 hours lecture, 1 recitation. Prerequisite: PHY 131.

PHY 412 Classical Particles, Fields, and Matter III. (3)

fall

Electromagnetic fields of moving charges, Maxwell's equations, harmonic phenomena, oscillations, waves, electromagnetic radiation, covariant electromagnetism, introduction to general relativity. Prerequisites: PHY 311, 333. Corequisite: PHY 416 or instructor approval.

PHY 416 Quantum Physics III. (3)

fall

Introduces the quantum theory of atoms, molecules, solids and nuclei, Dirac's equation. Prerequisites: PHY 311, 315. Corequisite: PHY 412 or instructor approval.

PHY 420 Research Paper. (1)

fall and spring

Scientific report writing. Culminates in a paper based on library or laboratory research or both. Taken in conjunction with other courses as approved. Conference. Prerequisite: instructor approval.

General Studies: L (if credit also earned in PHY 334)

PHY 441 Statistical and Thermal Physics I. (3)

fall

Statistical and experimental basis of heat, temperature, and entropy. Mechanical and statistical basis of the laws of thermodynamics. Applications of macroscopic thermodynamics. Phase equilibrium. Prerequisites: PHY 311, 315.

PHY 442 Statistical and Thermal Physics II. (3)

spring

Principles and applications of statistical mechanics. Quantum statistics of ideal gases and simple solids. Equilibrium of phases and chemical species. Transport theory. Irreversible processes and fluctuation. Prerequisite: PHY 441.

PHY 452 Physical Optics. (3)

fall

Principles of reflection, refraction, diffraction. Additional topics from contemporary optics may include Fourier transform spectroscopy, linear systems theory, holography. 2 hours lecture, 2 hours lab. Prerequisites: PHY 302, 311, 315. Corequisite: PHY 412.

PHY 462 Subatomic Physics. (3)

spring

Nuclear properties, models, decays and reactions; fundamental forces, field theories, symmetry principles; hadrons, quarks, and leptons; the Standard Model. Prerequisites: PHY 311, 315.

PHY 465 Advanced Laboratory II. (2)

fall and spring

Continuation of PHY 334. Students are encouraged to substitute laboratory research project in consultation with faculty sponsor. Prerequisite: PHY 334.

PHY 466 Advanced Laboratory III. (1–3)

fall and spring

Continuation of PHY 465. Prerequisite: PHY 465.

PHY 480 Methods of Teaching Physics. (3)

spring

Evaluation of various approaches to the teaching of high school physics. Preparation of demonstrations and experiments. Organization of a laboratory. Designed for secondary school physics teachers. Prerequisite: instructor approval.

PHY 481 Materials Physics I. (3)

fall

Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure. Credit is allowed for only PHY 481 or 511. Prerequisites: PHY 311, 315.

PHY 482 Materials Physics II. (3)

spring

Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics. Credit is allowed for only PHY 482 or 512. Prerequisite: PHY 481 (or its equivalent).

PHY 484 Internship: Physics Teaching. (1–4)

fall, spring, summer

Preparation for high school physics teaching. Student works closely with a faculty member in the elementary physics program. May be repeated for a total of 6 semester hours. Prerequisite: instructor approval.

PHY 495 Project Research. (1–3)

fall and spring

Supervised project in physics or astrophysics. May be repeated for credit. Prerequisite: instructor approval.

PHY 498 Pro-Seminar. (1–7)

selected semesters

Topics may include the following:

- Materials Physics II. (3)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

Department of Political Science

www.asu.edu/clas/polisci

480/965-6551

COOR 6801

Patrick Kenney, Chair

Professors: Ball, Dagger, Jones, Kahn, Kenney, Simon, Youngblood

Associate Professors: Ashley, Crittenden, Dantico, Doty, M. Elman, Herrera, Keating, Mitchell, Simhony, Warner

Assistant Professors: Chin, C. Elman, Goren, Hoekstra

POLITICAL SCIENCE—B.A.

The B.A. degree in Political Science consists of 42 semester hours, of which 30 must be in political science and 12 in related fields consisting of courses selected from the Departments of Anthropology, Chicana and Chicano Studies, Economics, Geography, History, Psychology, and Sociology, and the African American Studies and the Women's Studies programs. At least 15 hours in political science must be in upper-division courses.

The following courses are required:

POS 101 Political Ideologies <i>SB</i>	3
POS 110 Government and Politics <i>SB</i>	3
or POS 310 American National Government <i>SB</i> (3)	
POS 150 Comparative Government <i>SB, G</i>	3
or POS 160 Global Politics <i>SB, G</i> (3)	
POS 301 Empirical Political Inquiry <i>SB</i>	3
Total	12

Students who major in Political Science must have a minimum GPA of 2.00 for all courses that count toward the major. Upper-division courses that count toward the major must have a grade of "C" (2.00) or higher; no more than one "D" (1.00) grade in a lower-division course may be counted in the major. See "College Degree Requirements," page 318. No more than six hours of POS 484 Internship may be applied to the major.

POLITICAL SCIENCE—B.S.

The B.S. degree in Political Science consists of 48 semester hours, of which 36 must be in political science and 12 in related fields consisting of courses selected from the Departments of Anthropology, Chicana and Chicano Studies, Economics, Geography, History, Psychology, and Sociology, and the African American Studies and the Women's Studies programs. At least 21 hours in political science must be in upper-division courses.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

The following courses are required:

POS 101 Political Ideologies <i>SB</i>	3
POS 110 Government and Politics <i>SB</i>	3
or POS 310 American National Government <i>SB</i> (3)	
POS 150 Comparative Government <i>SB, G</i>	3
or POS 160 Global Politics <i>SB, G</i> (3)	
POS 301 Empirical Political Inquiry <i>SB</i>	3
POS 401 Political Statistics <i>CS</i>	3
Total	15

Students who major in Political Science must have a minimum GPA of 2.00 for all courses that count toward the major. Upper-division courses that count toward the major must have a grade of "C" (2.00) or higher; no more than one "D" (1.00) grade in a lower-division course may be counted in the major. See "College Degree Requirements," page 318. No more than six hours of POS 484 Internship may be applied to the major.

B.S. in Political Science with a Concentration in Public Policy Analysis

This degree and concentration combination is intended for students with a strong interest in public policy. It is designed to help students develop perspectives and skills applicable to public policy analysis and program evaluation. This concentration consists of a minimum of 36 semester hours in political science and 12 hours in related fields.

Required Courses

POS 101 Political Ideologies <i>SB</i>	3
POS 110 Government and Politics <i>SB</i>	3
or POS 310 American National Government <i>SB</i> (3)	
POS 150 Comparative Government <i>SB, G</i>	3
or POS 160 Global Politics <i>SB, G</i> (3)	
POS 220 Political Issues and Public Policy <i>SB</i>	3
POS 301 Empirical Political Inquiry <i>SB</i>	3
POS 325 Public Policy Development <i>SB</i>	3
POS 401 Political Statistics <i>CS</i>	3
POS 426 Elements of Public Policy <i>SB</i>	3
POS 484 Internship ¹	1-6
POS electives ²	6-9
Electives ³	12

¹ As approved by the political science internship coordinator.

² Additional POS elective courses are required.

³ In closely related fields, approved by a departmental academic advisor.

B.S. in Political Science with a Concentration in Public Policy Advocacy and Lobbying

This degree and concentration combination is intended for students interested in affecting public policy. It is designed to help students develop perspectives and skills useful to activists engaged in shaping public policy. This concentration consists of a minimum of 36 semester hours in political science and 12 hours in related fields.

Required Courses

POS 101 Political Ideologies <i>SB</i>	3
POS 110 Government and Politics <i>SB</i>	3
or POS 310 American National Government <i>SB</i> (3)	
POS 150 Comparative Government <i>SB, G</i>	3
or POS 160 Global Politics <i>SB, G</i> (3)	

POS 220 Political Issues and Public Policy <i>SB</i>	3
or POS 325 Public Policy Development <i>SB</i> (3)	
or POS 426 Elements of Public Policy <i>SB</i> (3)	
POS 301 Empirical Political Inquiry <i>SB</i>	3
POS 313 The Congress <i>SB</i>	3
POS 333 Interest Groups <i>SB</i>	3
POS 401 Political Statistics <i>CS</i>	3
POS 484 Internship ¹	1-6
POS electives ²	6-9
Electives ³	12

¹ As approved by the political science internship coordinator.

² Additional POS elective courses are required.

³ In closely related fields, approved by a departmental academic advisor.

CERTIFICATES

Certificate in American Public Policy. The American Public Policy Certificate is designed for undergraduate students who are anticipating careers in government, public service, or public administration and/or who are interested in understanding the dynamics of policy making and administration in American government.

Students majoring in any subject at the university may pursue the American Public Policy Certificate. To be awarded the certificate, the student must complete at least 15 semester hours of political science courses as follows:

Choose one from the courses below	3
POS 110 Government and Politics <i>SB</i> (3)	
POS 310 American National Government <i>SB</i> (3)	
Choose two or three from the courses below	6 or 9
POS 220 Political Issues and Public Policy <i>SB</i> (3)	
POS 325 Public Policy Development <i>SB</i> (3)	
POS 426 Elements of Public Policy <i>SB</i> (3)	
Choose one or two from the courses below	3 or 6
POS 316 State and Local Government <i>SB</i> (3)	
POS 320 Public Administration <i>SB</i> (3)	
POS 410 Governing American Cities <i>SB</i> (3)	
Choose one from the courses below	3
POS 313 The Congress <i>SB</i> (3)	
POS 314 The American Presidency <i>SB</i> (3)	
POS 484 Internship (up to 3 semester hours for a policy/administration-related internship) (3)	
Minimum total	15

Certificate students must have a minimum GPA of 2.00; only courses in which students have a grade of "C" (2.00) or higher count toward the certificate.

Asian Studies Certificate or Emphasis. Students majoring in Political Science may elect to pursue an Asian Studies Certificate combining courses from the major with selected outside courses of wholly Asian content. See "Asian Studies," page 326, for more information.

Certificate in Civic Education. The Civic Education Certificate is designed to contribute to the preparation of undergraduate students for

- 1. careers in primary and secondary education (where the teaching of government and civics may be involved);

2. careers or voluntary participation in politics, public service, and civic and social movements; and
3. further education in law, journalism, business, history, sociology, political science, and other fields where an understanding of questions of citizenship, leadership, community, democracy, public responsibility, and ethics is crucial.

The certificate does not substitute for degree requirements in any subject, including Political Science; rather, as a complement to the student's chosen major, the certificate program is intended to guide students to a variety of courses whose successful completion indicates their special accomplishment in the area of civic education.

Students majoring in any subject at the university may be awarded the Civic Education Certificate upon completion of the following 15 semester hours of political science courses:

POS 101 Political Ideologies <i>SB</i>	3
POS 346 Problems of Democracy <i>HU</i>	3
POS 442 American Political Thought <i>HU</i>	3
Choose one from the courses below	3
POS 340 History of Political Philosophy I <i>HU, H</i>	(3)
POS 341 History of Political Philosophy II <i>HU, H</i>	(3)
POS 443 Topics in Contemporary Political Theory <i>HU</i>	(3)
Choose one from the courses below	3
POS 110 Government and Politics <i>SB</i>	(3)
POS 150 Comparative Government <i>SB, G</i>	(3)
POS 160 Global Politics <i>SB, G</i>	(3)
POS 270 American Legal System <i>SB</i>	(3)
POS 300 Contemporary Controversies in Global Politics <i>SB, G</i>	(3)
POS 313 The Congress <i>SB</i>	(3)
POS 314 The American Presidency <i>SB</i>	(3)
POS 315 The Supreme Court <i>SB</i>	(3)
POS 330 Contemporary Controversies in Domestic Politics <i>SB</i>	(3)
POS 332 American Political Parties <i>SB</i>	(3)
POS 333 Interest Groups <i>SB</i>	(3)
POS 370 Law and Society <i>SB</i>	(3)
POS 417 The Arizona Political System <i>SB</i>	(3)
POS 435 Women and Politics <i>SB, C</i>	(3)
POS 439 Minority Group Politics in America <i>SB, C</i>	(3)
Total	15

Certificate students must have a minimum GPA of 2.00; only courses in which students have a grade of "C" (2.00) or higher count toward the certificate.

Certificate in International Studies. The International Studies Certificate is designed to prepare students for careers in government agencies, international governmental and nongovernmental organizations, multinational firms and banks, and for graduate studies in International Relations or Political Science. The certificate is not a substitute for degree requirements in any subject, including political science; rather, the required courses add an international and comparative dimension to the student's chosen major.

Requirements for the certificate are intended to provide an understanding of international relations and comparative government, an awareness of global social and political-economic processes, and sensitivity to foreign political systems and cultures. These objectives are met by a sequence

of political science courses in the areas of international relations, comparative politics, and area studies.

Students majoring in any subject at the university may be awarded the International Studies Certificate upon completion of the following 15 semester hours of political science courses:

Choose one from the courses below	3
POS 150 Comparative Government <i>SB, G</i>	(3)
POS 160 Global Politics <i>SB, G</i>	(3)
Choose one from the courses below	3
POS 361 American Foreign Policy <i>SB, G</i>	(3)
POS 364 National Security, Intelligence, and Terrorism <i>SB</i>	(3)
Choose two from the courses below	6
POS 300 Contemporary Controversies in Global Politics <i>SB, G</i>	(3)
POS 465 International Organization and Law <i>SB, G</i>	(3)
POS 467 International Security <i>SB, G</i>	(3)
POS 486 International Political Economy <i>SB, G</i>	(3)
Choose one from the courses below	3
POS 350 Comparative Politics <i>SB, G</i>	(3)
POS 355 Russia and Successor States <i>SB, G</i>	(3)
POS 356 European Union <i>SB, G</i>	(3)
POS 357 South Asia Politics <i>SB, G</i>	(3)
POS 358 Southeast Asia <i>SB, G</i>	(3)
POS 359 African Politics and Society <i>SB, G</i>	(3)
POS 360 World Politics <i>SB, G</i>	(3)
POS 451 China, Japan, and the Koreas <i>SB, G</i>	(3)
POS 452 China <i>SB, G</i>	(3)
POS 453 South America <i>SB, G</i>	(3)
POS 454 Mexico <i>SB, G</i>	(3)
POS 455 Central America and the Caribbean <i>SB, G</i>	(3)
POS 459 South and Southern Africa <i>SB, G</i>	(3)
POS 463 Inter-American Relations <i>SB, G</i>	(3)
POS 468 Comparative Asian Foreign Policies <i>SB, G</i>	(3)
Total	15

Honors students who select an international topic for their theses may apply thesis credit toward the 15 hours of international course work for the certificate.

Depending upon their interests, certificate students are strongly advised to take 12 semester hours or more from appropriate courses in anthropology (ASB), economics (ECN), geography (GCU), history (HST), international business studies (IBS), and sociology (SOC). Knowledge of a modern foreign language equivalent to at least two years of college study is strongly recommended.

Certificate students must have a minimum GPA of 2.00; only courses in which students have a grade of "C" (2.00) or higher count toward the certificate.

Latin American Studies Certificate or Emphasis.

Students majoring in Political Science may elect to pursue a Latin American Studies Certificate combining courses from the major with selected outside courses of wholly Latin American content. See "Latin American Studies," page 328, for more information.

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

MINOR IN POLITICAL SCIENCE

The minor in Political Science consists of 18 semester hours in political science courses, 12 hours of which must be upper-division courses. Students who minor in Political Science must have two courses from among the following:

POS 101 Political Ideologies <i>SB</i>	3
POS 110 Government and Politics <i>SB</i>	3
or POS 310 American National Government <i>SB</i> (3)	
POS 150 Comparative Government <i>SB, G</i>	3
POS 160 Global Politics <i>SB, G</i>	3

Students who minor in Political Science must have a minimum GPA of 2.00 for all courses that count toward the minor. Upper-division courses that count toward the minor must have a grade of "C" (2.00) or higher; no more than one "D" (1.00) grade in a lower-division course may be counted toward the minor. No more than three hours of POS 484 Internship and three hours of POS 499 Individualized Instruction may be applied to the minor.

B.I.S. CONCENTRATIONS

Concentrations in political science (with American public policy, civic education, and international studies options) are available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 123.

SECONDARY EDUCATION—B.A.E.

This degree is offered through the Initial Teacher Certification (ITC) program in the College of Education. Students pursuing a major in Secondary Education with an academic specialization in political science have an advisor in the College of Education and an advisor within the Department of Political Science.

See "College of Education," page 189, for information on admission eligibility requirements, admission deadlines, field experiences, and student teaching. For more information, or to schedule an appointment with an advisor, call the Office of Student Services in the College of Education at 480/965-5555.

Academic Specialization ITC Admission Requirements

At least four required courses in the academic specialization must be completed with a grade of "C" (2.00) or higher before applying to the ITC professional program.

Political Science. The major teaching field consists of 41–42 semester hours and six hours in teaching methods. A minimum grade of "C" (2.00) is required in all academic specialization courses. Required major courses are as follows:

POS 101 Political Ideologies <i>SB</i>	3
POS 110 Government and Politics <i>SB</i>	3
or POS 310 American National Government <i>SB</i> (3)	

POS 150 Comparative Government <i>SB, G</i>	3
or POS 160 Global Politics <i>SB, G</i> (3)	
POS 311 Arizona Constitution and Government	2
or POS 417 The Arizona Political System <i>SB</i> (3)	
POS 417 The Arizona Political System	3
Electives ¹	15
Related area ²	12
Total	41–42

¹ Six hours must be in the upper division.

² Choose in consultation with a department advisor.

Students are required to complete two methods courses, one of which is SED 480 Methods of Teaching Social Studies. For the second methods course, students select from the following:

GCU 414 Teaching Geography Standards	3
GCU 494 ST: Geography in the K–12 Classroom	3
HST 480 Methods of Teaching History: Classroom Resources	3
HST 481 Methods of Teaching History: Community Resources	3

The minor teaching field consists of 24 semester hours in political science courses.

The following six courses are required:

HST 480 Methods of Teaching History: Classroom Resources	3
POS 101 Political Ideologies <i>SB</i>	3
POS 110 Government and Politics <i>SB</i>	3
or POS 310 American National Government <i>SB</i> (3)	
POS 150 Comparative Government <i>SB, G</i>	3
or POS 160 Global Politics <i>SB, G</i> (3)	
POS 301 Empirical Political Inquiry <i>SB</i>	3
POS 417 The Arizona Political System <i>SB</i>	3
Total	18

Courses may be substituted for POS 417 and 480 with departmental approval.

Students who pursue this academic specialization in political science must have a minimum GPA of 2.00 for all courses that count toward the academic specialization. Upper-division courses that count toward the academic specialization must have a grade of "C" (2.00) or higher; no more than one "D" (1.00) grade in a lower-division course may be counted in the minor.

Social Studies. This degree is offered through the Initial Teacher Certification program in the College of Education. Students pursuing a major in Secondary Education have an advisor in the College of Education and an advisor within the department of their academic specialization area.

See "College of Education," page 189, for information on admission eligibility requirements, admission deadlines, field experiences, and student teaching. For more information, or to schedule an appointment with an advisor, call the Office of Student Services in the College of Education at 480/965-5555.

GRADUATE PROGRAMS

The faculty in the Department of Political Science offer programs leading to the M.A. and Ph.D. degrees. See the *Graduate Catalog* for requirements.

POLITICAL SCIENCE (POS)

POS 101 Political Ideologies. (3)*fall and spring*

Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.

*General Studies: SB***POS 110 Government and Politics. (3)***fall and spring*

Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 110 or 310.

*General Studies: SB***POS 150 Comparative Government. (3)***fall and spring*

Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.

*General Studies: SB, G***POS 160 Global Politics. (3)***fall and spring*

Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas.

*General Studies: SB, G***POS 220 Political Issues and Public Policy. (3)***once a year*

Contemporary social problems and political issues, particularly development of public policy.

*General Studies: SB***POS 230 Current Issues in National Politics. (3)***fall and spring*

Major issues facing national governments in the domestic field. Prerequisite: ENG 101 or 105.

*General Studies: L/SB***POS 240 Introduction to Southeast Asia. (3)***fall and spring*

Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia. Cross-listed as ASB 240/GCU 240/HST 240/REL 240. Credit is allowed for only ASB 240 or GCU 240 or HST 240 or POS 240 or REL 240.

*General Studies: HU, G***POS 260 Current Issues in International Politics. (3)***fall and spring*

Analyzes major current problems in world politics. Prerequisite: ENG 101 or 105.

*General Studies: L/SB, G***POS 270 American Legal System. (3)***fall and spring*

Concepts, institutions, classifications, and functions of law. Role of the courts and impact of judicial decision making on social change.

*General Studies: SB***POS 300 Contemporary Controversies in Global Politics. (3)***fall and spring*

Explores key controversies in global politics, including security, economic stability, poverty, gender, race, and the environment.

*General Studies: SB, G***POS 301 Empirical Political Inquiry. (3)***fall and spring*

Logic of political inquiry, including research problems, concepts, hypotheses, theories, measurement, data collection, and analysis.

*General Studies: SB***POS 305 Politics and Film. (3)***once a year*

Examines portrayal of political events, ethnic groups, and sociopolitical situations in film, a major medium addressing questions of human values. May be repeated for credit when topics vary. Lecture, film, discussion.

*General Studies: SB***POS 310 American National Government. (3)***fall and spring*

Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 310 or 110.

*General Studies: SB***POS 311 Arizona Constitution and Government. (2)***fall and spring*

Constitution and government of the State of Arizona. Credit is allowed for only POS 311 or 316 or 417. Meets the Arizona constitution requirement for teacher certification. May not be counted for the major or a teaching major or minor in Political Science.

POS 313 The Congress. (3)*once a year*

Lawmaking process in the U.S. Congress.

*General Studies: SB***POS 314 The American Presidency. (3)***once a year*

Office, role, and power of the American presidency in the American political system.

*General Studies: SB***POS 315 The Supreme Court. (3)***once a year*

Role of the Supreme Court in American society and politics; examines decision-making process and impact of decisions; restraint versus activism.

*General Studies: SB***POS 316 State and Local Government. (3)***once a year*

Survey of the operations, problems, and policies of state and local governments in the United States. Credit is allowed for only POS 316 or 311.

*General Studies: SB***POS 320 Public Administration. (3)***once a year*

Role of the administrator in the political process with an examination of the basic concepts of bureaucracy.

*General Studies: SB***POS 325 Public Policy Development. (3)***once a year*

Examines one or more aspects of public policy development, including agenda setting and policy formulation, implementation, and analysis.

*General Studies: SB***POS 330 Contemporary Controversies in Domestic Politics. (3)***fall and spring*

Explores key controversies in domestic politics, including the environment, the economy, poverty, gender, race, and security.

*General Studies: SB***POS 331 Public Opinion. (3)***once a year*

Formation, expression, and influence of individual and organized opinion on political institutions.

*General Studies: SB***POS 332 American Political Parties. (3)***once a year*

Development of the American party system. Party organization and functions.

*General Studies: SB***POS 333 Interest Groups. (3)***once a year*

Examines how minority, corporate, labor, farm, consumer, environmental, health, education and public interest groups, and single-issue movements influence government.

*General Studies: SB***POS 336 Voters in America. (3)***once a year*

Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.

*General Studies: SB***POS 340 History of Political Philosophy I. (3)***once a year*

Western political philosophers and their theories to the 17th century.

General Studies: HU, H

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

POS 341 History of Political Philosophy II. (3)

once a year

Western political philosophers and their theories from the 17th to the 20th centuries.

General Studies: HU, H

POS 346 Problems of Democracy. (3)

once a year

Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.

General Studies: HU

POS 350 Comparative Politics. (3)

once a year

Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.

General Studies: SB, G

POS 351 Democratization. (3)

fall

Examines the consolidation of democracies in postauthoritarian and postcommunist settings (e.g., Latin America, Eastern Europe, Asia).

General Studies: SB, G

POS 355 Russia and Successor States. (3)

once a year

Description and analysis of political institutions and practices in Russia and successor states.

General Studies: SB, G

POS 356 European Union. (3)

once a year

History and workings of EU member states, including single market, Euro, legal system, ethnonationalism, immigration, expansion, trade wars, and defense.

General Studies: SB, G

POS 357 South Asia Politics. (3)

once a year

Political culture and systems of South Asia examined through study of political writings, novels, and poetry. Lecture, discussion.

General Studies: SB, G

POS 358 Southeast Asia. (3)

once a year

Political background, governmental institutions, political dynamics, and developmental problems of Southeast Asian nations.

General Studies: SB, G

POS 359 African Politics and Society. (3)

selected semesters

Comparative analysis of socioeconomic forces, political processes, government institutions, and political novels in Sub-Saharan Africa.

General Studies: SB, G

POS 360 World Politics. (3)

once a year

Theory and practice of statecraft as applied to selected issues, regions, or eras. May be repeated for credit when topics vary.

General Studies: SB, G

POS 361 American Foreign Policy. (3)

once a year

United States in world affairs; foreign policy since World War I. Techniques in formulating American foreign policies.

General Studies: SB, G

POS 364 National Security, Intelligence, and Terrorism. (3)

once a year

Theoretical and empirical assessment of U.S. national security policy in the post-cold war era.

General Studies: SB

POS 368 Ethics and Human Rights. (3)

spring

Explores issues of ethics, morality, and human rights in the global community. Lecture, discussion.

POS 369 War, Politics, and Society. (3)

fall in odd years

Relationships between techniques/technology of war and political/social structures in different time periods and locations. Who commands, dies, and pays?

POS 370 Law and Society. (3)

once a year

Analyzes debates among social scientists and legal theorists concerning the relationship between "law" and "society."

General Studies: SB

POS 401 Political Statistics. (3)

fall and spring

Basic concepts in statistics as they facilitate the description, explanation, and prediction of social and political phenomena.

General Studies: CS

POS 410 Governing American Cities. (3)

once a year

Reviews modern urban problems, their sources, and potential solutions, including structural and policy alternatives.

General Studies: SB

POS 417 The Arizona Political System. (3)

selected semesters

Contemporary political problems within the context of Arizona's constitutional, political, and social frameworks. Meets the Arizona Constitution requirement for teacher certification. Credit is allowed for only POS 417 or 311.

General Studies: SB

POS 426 Elements of Public Policy. (3)

once a year

Each section may cover one of the following topics: consumer protection, natural resources, criminal justice, environmental protection, science and technology, or theories of public policy. May be repeated for credit when topics vary.

General Studies: SB

POS 431 Campaigns and Elections. (3)

once a year

Examines campaigns from a multitude of perspectives, including the politician, reporter, campaign strategist, and voter. Lecture, discussion.

General Studies: SB

POS 433 Money and Politics. (3)

once a year

Role of money and special interests in elections, campaign politics, and public policy-making in American politics. Lecture, discussion.

General Studies: SB

POS 434 Media and Politics. (3)

once a year

Studies mass media and politics in the United States, e.g., media and elections, media and government. Lecture, discussion.

General Studies: SB

POS 435 Women and Politics. (3)

selected semesters

Focuses on the uniqueness of women in modern political systems and political thought. Emphasis may vary with instructor.

General Studies: SB, C

POS 439 Minority Group Politics in America. (3)

selected semesters

Role of minority groups in American politics.

General Studies: SB, C

POS 442 American Political Thought. (3)

once a year

Political theories and movements from the colonial period to the present.

General Studies: HU

POS 443 Topics in Contemporary Political Theory. (3)

once a year

Major problems and theories in contemporary political thought.

General Studies: HU

POS 445 Asian Political Thought. (3)

once a year

Contemporary political ideas and theories in selected Asian countries, including the impact of Marxist and non-Marxist theories on revolutionary processes.

General Studies: SB, G

POS 451 China, Japan, and the Koreas. (3)*once a year*

Comparative analysis of the political modernization experiences of China, Japan, and the two Koreas, focusing on their differing reactions to the West.

*General Studies: SB, G***POS 452 China. (3)***once a year*

Background of the Communist revolution, political processes, and developmental problems in China from a comparative perspective.

*General Studies: SB, G***POS 453 South America. (3)***once a year*

Political institutions, process, and developmental problems of South American states examined through comparative analysis, novels, and poetry.

*General Studies: SB, G***POS 454 Mexico. (3)***once a year*

Mexican federal, state, and local governmental institutions.

*General Studies: SB, G***POS 455 Central America and the Caribbean. (3)***once a year*

Governmental institutions, political processes, and developmental problems of the nation-states and dependent areas of Central America and the Caribbean.

*General Studies: SB, G***POS 459 South and Southern Africa. (3)***once a year*

Post-apartheid South African government and politics; South Africa and the southern African region; regional security and development.

*General Studies: SB, G***POS 463 Inter-American Relations. (3)***once a year*

Diplomatic relations among the Latin American states. Development of U.S. foreign policy toward Latin America.

*General Studies: SB, G***POS 465 International Organization and Law. (3)***once a year*

History, practical political significance, and future of international institutions, transnational regimes, and international law.

*General Studies: SB, G***POS 467 International Security. (3)***once a year*

Examines issues affecting the international security of states and peoples, e.g., military, economic, technological, environmental, and demographic.

*General Studies: SB, G***POS 468 Comparative Asian Foreign Policies. (3)***once a year*

Foreign policies of the Asian states, emphasizing their security relations and movements toward regionalism.

*General Studies: SB, G***POS 471 Constitutional Law I. (3)***once a year*

Development of the U.S. Constitution as reflected in decisions of the Supreme Court; jurisdiction and organization of the federal courts; judicial review; separation of powers; federalism; the commerce clause; national taxing and spending power; state police power.

*General Studies: SB***POS 472 Constitutional Law II. (3)***once a year*

Development of the U.S. Constitution as reflected in decisions of the Supreme Court; due process; equal protection of laws; individual rights; civil liberties.

*General Studies: SB***POS 484 Internship. (1-12)***selected semesters***POS 485 Political Economy. (3)***once a year*

Problems, policies, and possibilities of various political-economic systems and interrelationship of capitalism, socialism, and democracy.

*General Studies: SB***POS 486 International Political Economy. (3)***once a year*

Contending approaches to historical and contemporary issues of international political economy, including global welfare, equality, ecology, and peace.

*General Studies: SB, G***POS 498 Pro-Seminar. (3)***once a year*

Small group study and research for advanced students within their major area. Prerequisite: major in the department or instructor approval.

*General Studies: L***POS 499 Individualized Instruction. (3)***selected semesters*

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

Department of Psychology

psych.la.asu.edu

480/965-3326

PSY 237

Darwyn E. Linder, Chair

Regents' Professors: Cialdini, Eisenberg, Russo, Sandler

Professors: Aiken, Barrera, Braver, Castro, Chassin, Homa, Karoly, Kenrick, Killeen, Knight, Lanyon, Linder, MacKinnon, Millsap, Neisewander, Neuberg, Okun, Parkinson, Presson, Reich, Sadalla, Somerville, Van Orden, West, Wolchik, Zutra

Associate Professors: Alexander, Castaneda, Conrad, Davis, Fabricius, Goldinger, Gonzales, Leshowitz, McBeath, Nagoshi, Nemeroff, Saenz, Stone

Assistant Professors: E. Amazeen, P. Amazeen, Khoo, Lemery, Luecken

Senior Lecturers: Barton, Wosinski

Lecturer: Palmer

The Department of Psychology maintains an undergraduate advisement office staffed by trained personnel. All psychology majors are encouraged to meet with an advisor once each semester to ask questions regarding choices of courses. Failure to do so may prevent graduation at the expected time. It is the responsibility of the student to consult with an undergraduate advisor.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SG** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

PSYCHOLOGY—B.A.

The B.A. degree in Psychology consists of 37 semester hours in psychology, including at least 24 upper-division semester hours, and 12 semester hours of related course work. All courses must be passed with a minimum grade of "C" (2.00). The requirements are as follows:

I. Foundations of Psychology (10 semester hours)

PGS 101 Introduction to Psychology *SB* (3)

PSY 230 Introduction to Statistics *CS* (3)

PSY 290 Research Methods *L/SG* (4)

II. Breadth (12 semester hours)

One course from each of four of the following five clusters:

Biological: PSY 325

Personality/Mental Health: PGS 315, 466

Cognitive/Learning: PSY 320, 323, 324

Developmental: PGS 341

Social: PGS 306, 350, 351

III. Depth (six semester hours)

Two additional courses from one of the clusters used to meet the breadth requirements. At least one of the courses must be at the 400 level.

Biological: PSY 424, 425, 426, 470

Personality/Mental Health: PGS 315, 365, 443, 444, 462, 464, 465, 466, 468, 471, 472

Cognitive/Learning: PSY 320, 323, 324, 420, 434, 437

Developmental: PGS 344, 427, 441, 445, 446

Social: PGS 306, 350 or 351, 430, 451, 452, 458, 461

IV. Additional Psychology Courses (nine semester hours)

Three courses in psychology (two must be in the upper division) excluding PGS 270 and 394 or 494. Approved 200-level community college courses may be used in this category. These courses may not be used to also satisfy breadth or depth requirements. Students may count up to six semester hours in PGS or PSY 399 or 499 to satisfy this requirement. Honors students may count up to three semester hours of PSY 492 and three semester hours of PSY 493 (six semester hours total), in lieu of six semester hours of PGS or PSY 399 or 499, to satisfy this requirement.

V. Mathematics Foundation (three semester hours)

MAT 119, 251, or higher.

VI. Foundations of Behavior (nine semester hours)

Any three courses from among the following prefixes: ASB, ASM, BIO, GCU, SOC, PHI, and HPS.

For more information, see "College Degree Requirements," page 318.

PSYCHOLOGY—B.S.

The B.S. degree in Psychology is focused on the science of psychology and is designed specifically for students planning to pursue an advanced degree in psychology or related disciplines. The requirements for the B.S. degree in Psy-

chology are identical to the requirements for the B.A. degree with the following three exceptions:

1. PSY 330 must be completed as one of the options in the additional psychology course requirements.
2. At least three semester hours of PSY 390 or PGS or PSY 399 or 499 must be completed as one of the options in the additional psychology course requirements.
3. MAT 251 or higher must be completed for the mathematics foundation requirement.

MINOR IN PSYCHOLOGY

The minor in Psychology consists of completing the 22 semester hours of course work in the foundations of psychology and the breadth categories described above. Students with an appropriate equivalent course may exclude PSY 230 from the requirements. All courses must be passed with a minimum grade of "C" (2.00).

B.I.S. CONCENTRATION

A concentration in psychology is available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 123.

GRADUATE PROGRAMS

The faculty in the Department of Psychology offer a program leading to the Ph.D. degree. See the *Graduate Catalog* for requirements.

PSYCHOLOGY (SOCIAL AND BEHAVIORAL) (PGS)

PGS 101 Introduction to Psychology. (3)

fall, spring, summer

Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.

General Studies: SB

PGS 194 Special Topics. (1–4)

selected semesters

PGS 222 Human Sexual Behavior. (3)

fall and spring

Patterns of sexual behavior, including variations and deviations; theories of sexual attraction, sex differences, and sexual dysfunction and treatment. Prerequisite: PGS 101.

General Studies: SB

PGS 270 Psychology of Adjustment. (3)

fall, spring, summer

Principles of mental health, adjustment, conflict, stress, and coping processes derived from clinical and experimental research. Intended for nonmajors; cannot be used for major credit. Prerequisite: PGS 101.

General Studies: SB

PGS 304 Effective Thinking. (3)

once a year

Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making. Prerequisite: MAT 119 or PSY 230 (or its equivalent).

General Studies: L

PGS 306 Environmental Psychology. (3)*fall, spring, summer*

Concepts and research strategies in the study of behavior in interaction with physical environment. Prerequisite: PGS 101.

*General Studies: SB***PGS 315 Personality Theory and Research. (3)***fall, spring, summer*

Definition and description of personality in terms of theoretical and methodological approaches. Prerequisites: PGS 101; PSY 290.

*General Studies: SB***PGS 341 Developmental Psychology. (3)***fall and spring*

Analyzes behavior development in terms of psychological principles. Current research in human development. Prerequisites: PGS 101; PSY 290.

*General Studies: SB***PGS 344 Directed Child Study. (3–4)***fall, spring, summer*

Theories and methods of intervention with preschool children and supervised practicum in the Child Study Laboratory. 1 hour lecture, 6–8 hours practicum. Prerequisites: CDE 232; ECD 314 (or PSY 290).

PGS 350 Social Psychology. (3)*fall, spring, summer*

Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion. Prerequisite: PGS 101.

*General Studies: SB***PGS 351 Honors Social Psychology. (3)***selected semesters*

Critical analysis of human social behavior for honors students; topics include stereotyping, social influence, attraction, aggression, helping, groups, and attitudes. Open only to students without previous credit for PGS 350. Lecture, discussion. Prerequisites: PGS 101; honors standing; instructor approval.

*General Studies: L/SB***PGS 365 Community Psychology. (3)***fall and spring*

Mental health and psychological well-being in the community, emphasizing current issues and related research. Prerequisite: PGS 315 or 350.

*General Studies: SB***PGS 394 Special Topics. (1–4)***selected semesters*

Topics may include the following:

- Disease and AIDS in America

PGS 399 Supervised Research. (1–3)*fall, spring, summer*

Experience within the context of current faculty research projects. Responsibility is assigned depending on qualifications. "Y" grade only. May be repeated for a total of 6 hours. Prerequisites: approval of faculty member before registration; 3.00 GPA in major. Pre- or corequisite: PSY 230 (or its equivalent).

PGS 414 History of Psychology. (3)*fall and spring*

Historical development of psychology from its philosophical beginnings to the present. Prerequisites: PGS 101; PSY 230, 290.

*General Studies: L/SB***PGS 427 Psychology of Aging. (3)***selected semesters*

Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions. Prerequisites: PGS 101, 341.

*General Studies: L/SB***PGS 430 Industrial Psychology. (3)***fall, spring, summer*

Organizations and management systems; motivation and work performance; human factors in systems design and evaluation; personnel selection and testing. Prerequisite: MGT 300 or PGS 101.

PGS 441 Cognitive Development. (3)*fall and spring*

Experimental and theoretical literature in child development and behavior. Prerequisite: PGS 341 or instructor approval.

*General Studies: L/SB***PGS 443 Abnormal Child Psychology. (3)***fall and spring*

Covers major disorders of childhood and adolescence (e.g., autism, hyperactivity, phobias, and delinquency), including cause, diagnosis, treatment, and prevention. Prerequisites: both PGS 101 and 315 (or 341 or 350) or only instructor approval.

*General Studies: L/SB***PGS 444 Adolescent Psychology and Psychopathology. (3)***selected semesters*

Advanced-level survey of normal adolescent psychological development and psychological disorders of this age period. Lecture, discussion. Prerequisites: PGS 101, 341; PSY 290.

*General Studies: L***PGS 445 Child Language and Drawing. (3)***fall*

Language acquisition and developmental changes in drawing, considered in the context of cognitive developmental stages. Children's representation and communication of knowledge through language and drawing. Prerequisite: PGS 341.

*General Studies: SB***PGS 446 Social Development. (3)***selected semesters*

Discusses theory, research, and issues regarding social development. Example topics: formation of attachments, prosocial development, and gender-role development. Lecture, seminar. Prerequisite: PGS 341.

*General Studies: L***PGS 451 Stereotyping, Prejudice, and Discrimination. (3)***selected semesters*

Critical investigation of the processes underlying, and the factors contributing to, stereotyping, prejudice, and discrimination. Lecture, discussion. Prerequisites: PGS 101, 350.

*General Studies: L***PGS 452 Applied Social Psychology. (3)***fall*

Studies applications of social psychological theory and concepts in natural settings; research design and data analysis. Lecture, lab-type activities. Prerequisites: PGS 101, 350; PSY 230.

*General Studies: L***PGS 458 Group Dynamics. (3)***fall*

Theories and methods of group leadership, group effectiveness, communication within groups, and relations between groups and individual members. Prerequisite: PGS 350.

PGS 461 Interpersonal Influence. (3)*selected semesters*

Principles and procedures that affect the process of social influence; consideration of attitudinal, compliance-inducing, and perceptual influences. Prerequisite: PGS 350.

*General Studies: SB***PGS 462 Health Psychology. (3)***fall and spring*

Contributions of psychology to health promotion and illness prevention, adaptation to acute and chronic illness, and to the health care system. Prerequisites: PSY 230, 290.

PGS 464 Minority Issues in Psychology. (3)*spring*

Psychological issues relating to the diversity of human cultural experiences among ethnic minorities in the U.S. Prerequisite: PSY 290.

PGS 465 Psychology of Stress and Coping. (3)*fall*

Readings in theory and research in the area of stress and coping. Lecture, discussion, class presentations. Prerequisites: PGS 315 (or 350); PSY 290.

General Studies: L

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

PGS 466 Abnormal Psychology. (3)

fall, spring, summer

Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches. Prerequisites: PGS 101; PSY 290.

General Studies: SB

PGS 467 Psychology of Magical Beliefs. (3)

selected semesters

Psychological nature and bases of magical beliefs and their impact on health behaviors, eating practices, and interpersonal relations. Lecture, seminar. Prerequisites: a combination of PGS 315 and 466 and PSY 434 or only instructor approval.

General Studies: L

PGS 468 Psychology and Law. (3)

fall and spring

Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues. Lecture, discussion. Prerequisite: PSY 290.

PGS 471 Psychological Testing. (3)

spring

Methods and theory of psychological testing; various types of psychological tests; consideration of ethical, social, and legal aspects of testing. Prerequisite: PSY 290.

PGS 472 Clinical Psychology. (3)

fall and spring

Clinical psychology as a science and profession. Historical development, methods of interviewing, assessment, and therapeutic intervention. Prerequisite: PGS 466.

PGS 484 Internship. (1–12)

selected semesters

PGS 494 Special Topics. (1–4)

selected semesters

PGS 499 Individualized Instruction. (1–3)

selected semesters

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

PSYCHOLOGY (SCIENCE AND MATHEMATICS) (PSY)

For more PSY courses, see the "Faculty of Applied Psychology" under "East College" at "ASU East."

M PSY 230 Introduction to Statistics. (3)

fall, spring, summer

Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology. Self-paced (PSI) and lecture sections. Prerequisites: MAT 117; PGS 101.

General Studies: CS

M PSY 290 Research Methods. (4)

fall and spring

Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research. 3 hours lecture, 3 hours lab. Prerequisites: ENG 101 (or 105); PSY 230.

General Studies: L/SG

M PSY 320 Learning and Motivation. (3)

fall, spring, summer

Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer. Prerequisite: PSY 290.

M PSY 323 Sensation and Perception. (3)

fall and spring

Underlying processes of vision, audition, and the other senses. Applies current research and theory in a laboratory environment. Prerequisite: PSY 290 or instructor approval.

M PSY 324 Memory and Cognition. (3)

fall, spring, summer

Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes. Prerequisite: PSY 290.

M PSY 325 Physiological Psychology. (3)

fall, spring, summer

Relationships of physiological processes to behavior. Emphasizes nervous system functioning. Prerequisites: PSY 290 (or 2 courses in biological science); instructor approval.

M PSY 330 Statistical Methods. (3)

spring

Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school. 3 hours lecture, 1 hour lab. Prerequisite: PSY 230.

General Studies: CS

M PSY 390 Experimental Psychology. (3)

spring

Continuation of concepts in PSY 290, with emphasis on multifactor designs and programmatic sequence of experiments. Lecture, lab. Prerequisite: PSY 290.

General Studies: L

M PSY 399 Supervised Research. (1–3)

fall, spring, summer

M PSY 420 Analysis of Behavior. (3)

selected semesters

Research, applications, and philosophy of the analysis and control of human behavior. Prerequisite: PSY 290.

General Studies: L

M PSY 422 Motor Control in Special Populations. (3)

spring

Discusses principles of motor control theories and related practical applications for certain special developmental populations. Lecture, discussion. Cross-listed as KIN 422. Credit is allowed for only KIN 422 or PSY 422. Prerequisite: KIN 345.

M PSY 424 Genetic Psychology. (3)

spring

Introduces the concepts, methodologies, and findings of behavioral genetics for Psychology majors. Prerequisites: PGS 101; PSY 230, 290.

General Studies: L

M PSY 425 Biological Bases of Behavior. (3)

selected semesters

Critical study of physiological psychology; brain mechanisms underlying motivation and learning. Prerequisite: PSY 325.

General Studies: L

M PSY 426 Neuroanatomy. (4)

selected semesters

Structure and function of mammalian brain, including sheep brain dissection. 3 hours lecture, 3 hours lab. Prerequisite: PSY 325 (or its equivalent).

M PSY 434 Cognitive Psychology. (3)

spring

Human organism as a processor of information, from perception to cognition. Abstract concepts, semantic memory, attention, and mental imagery. Prerequisite: PSY 323 or 324 or instructor approval.

General Studies: L

M PSY 437 Human Factors. (3)

fall

Emphasizes human factors in high-technology systems. Specific topics include systems development, systems analysis techniques, displays, and controls. Prerequisites: both PSY 290 and upper-division standing or only instructor approval.

General Studies: L

M PSY 470 Psychopharmacology. (3)

fall and spring

Basis of drug action at physiological and behavioral levels. Psychological and medical applications and limitations of drugs used in the treatment of mental illness. Prerequisites: PSY 325; 1 semester each of biology and chemistry.

M PSY 484 Internship. (1–12)

selected semesters

M PSY 492 Honors Directed Study. (1–6)

selected semesters

M PSY 493 Honors Thesis. (1–6)

selected semesters

M PSY 494 Special Topics. (1–4)
selected semesters

M PSY 497 Honors Colloquium. (1–6)
selected semesters

M PSY 498 Pro-Seminar. (1–7)
fall and spring

Topics may include the following:

- Behavioral Neuroscience Research. (3)
General Studies: L

M PSY 499 Individualized Instruction. (1–3)
selected semesters

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

Department of Religious Studies

www.asu.edu/clas/religious_studies

480/965-7145

ECA 377

Joel D. Gereboff, Chair

Professors: Cady, Coudert, Feldhaus, Foard, Morrison, Samuelson

Associate Professors: Clay, Fessenden, Gereboff, Moore, Schober, Swanson, Woodward

Assistant Professors: Benn, Damrel, Leon, Park, Umar

RELIGIOUS STUDIES—B.A.

The B.A. degree in Religious Studies consists of 45 semester hours, 30 of which must be in religious studies (including 21 in upper-division courses) and 15 of which must be in related fields. In order for the student to become acquainted with the character and role of religions across a wide spectrum of social and historical contexts, the 30 semester hours in religious studies must include the following courses:

1. REL 305 Ritual, Symbol, and Myth;
2. at least one course from each of the following distribution areas: Religion in the Americas, Religion and Asian Cultures, and Religion and Western Cultures;
3. REL 400 Approaches to Religion; and
4. two research seminars, including REL 405 Problems in Religious Studies, which may be repeated for credit; or
5. in place of a second seminar, a student may take REL 499 to write an undergraduate thesis.

The Religious Studies major is an appropriate choice for students wishing to explore such areas as African or African

American studies; Islamic studies; myth, ritual, and the arts; Native American studies; and religion and politics. All majors must plan their programs in consultation with a departmental advisor. A minimum GPA of 2.50 is required in the 30 semester hours of religious studies courses.

MINOR IN RELIGIOUS STUDIES

The minor in Religious Studies consists of 18 semester hours, at least 12 of which must be in the upper division. Both REL 305 and 405 are required. For minor verification, students must consult a department advisor.

B.I.S. CONCENTRATION

A concentration in religious studies is available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 123.

CERTIFICATES AND EMPHASES

The following are certificate programs or emphases offered in the Department of Religious Studies. For more information on each, see "Certificate Programs and Areas of Emphasis," page 325, or access the department Web site at www.asu.edu/clas/religious_studies.

Asian Studies Certificate. Students majoring in Religious Studies may elect to pursue an Asian Studies emphasis or East Asian Studies Certificate combining courses from the major with selected outside courses of wholly Asian content.

Islamic Studies Certificate. Students majoring in Religious Studies may elect to earn an Islamic Studies Certificate by successfully completing the requirements mentioned in "Islamic Studies Certificate," page 327.

Jewish Studies Certificate. Students majoring in Religious Studies may elect to pursue a Jewish Studies Certificate combining courses from the major with selected outside courses in the area of Jewish Studies.

Latin American Studies Certificate. Students majoring in Religious Studies may elect to pursue a Latin American Studies certificate combining courses from the major with selected outside courses of wholly Latin American content.

Russian and East European Studies. Students majoring in Religious Studies may elect to earn a Russian and East European Studies Certificate by successfully completing one of the options mentioned in "Russian and European Studies," page 328.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 91.



Teaching Assistant Marea Baggetta leads a freshman-level Biology 188 lab. As part of the College of Liberal Arts and Sciences living-learning community concept, students learn scientific methods together during class and share the same residence hall.

Tim Trumble photo

Southeast Asian Studies Emphasis. Students majoring in Religious Studies may elect to earn a Southeast Asian Studies Certificate by successfully completing the requirements.

Women's Studies. Students majoring in Religious Studies may elect to earn a Women's Studies Certificate by successfully completing the requirements.

GRADUATE PROGRAM

The faculty in the Department of Religious Studies offer a graduate program leading to the M.A. degree for those who wish to enter a doctoral program in the study of religions, for those who wish to teach at the community college level, and for those in nonacademic careers who desire general competence in the academic study of religions. A doctoral program is offered. See the *Graduate Catalog* for requirements.

RELIGIOUS STUDIES (REL)

REL 100 Religions of the World. (3)

fall and spring

Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others. Credit is allowed for only REL 100 or 200.

General Studies: HU, G

REL 200 The Study of Religious Traditions. (3)

selected semesters

Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world. Credit is allowed for only REL 200 or 100. Prerequisite: ENG 101 or 105.

General Studies: L/HU, G

REL 201 Religion and the Modern World. (3)

once a year

Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world. Prerequisite: ENG 101 or 105.

General Studies: L/HU

REL 202 Religion and Popular Culture. (3)

once a year

Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film. Lecture, discussion.

General Studies: HU, C

REL 203 Saints and Sinners: Explorations in Sacred Biography. (3)

selected semesters

Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners. Lecture, discussion.

General Studies: HU, H

REL 210 Introduction to Judaism. (3)*once a year*

Beliefs, ceremonies, festivals, and institutions of Judaism emphasizing the contemporary era. Assumes no previous knowledge about Judaism. Prerequisite: ENG 101 or 105.

*General Studies: L/HU, H***REL 225 African American Religion. (3)***selected semesters*

Introduces the history and development of the African American religious tradition. Lecture, discussion.

*General Studies: HU, C***REL 240 Introduction to Southeast Asia. (3)***fall and spring*

Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia. Cross-listed as ASB 240/GCU 240/HST 240/POS 240. Credit is allowed for only ASB 240 or GCU 240 or HST 240 or POS 240 or REL 240.

*General Studies: HU, G***REL 260 Introduction to Islam. (3)***spring*

Examines Islamic beliefs, ceremonies, festivals, and institutions. Assumes no prior knowledge about Islam. Lecture, discussion.

*General Studies: HU, G***REL 270 Introduction to Christianity. (3)***once a year*

Beliefs, ceremonies, festivals, and institutions of Christianity, emphasizing the contemporary era. Assumes no previous knowledge about Christianity.

*General Studies: HU***REL 301 Comparative Mysticism. (3)***once a year*

Comparative examination of Eastern and Western mystical traditions from antiquity to the present. Lecture, discussion. Prerequisite: REL 100.

*General Studies: HU***REL 305 Ritual, Symbol, and Myth. (3)***fall and spring*

Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.

*General Studies: L/HU***REL 310 Western Religious Traditions. (3)***fall and spring*

Religious traditions of Judaism, Christianity, and Islam, comparing their doctrinal, institutional, and ritual systems and social histories. Lecture, discussion.

*General Studies: HU, H***REL 315 Hebrew Bible (Old Testament). (3)***once a year*

Nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation.

*General Studies: L/HU, H***REL 317 Introduction to Rabbinic Judaism. (3)***selected semesters*

Historical analysis of the thought, literature, and institutions of rabbinic Judaism.

*General Studies: HU, H***REL 318 Contemporary American Jewish Identities. (3)***spring*

Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs. Lecture, discussion. Cross-listed as SOC 375. Credit is allowed for only REL 318 or SOC 375.

*General Studies: HU/SB, C***REL 320 American Religious Traditions. (3)***fall and spring*

Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).

*General Studies: HU, C, H***REL 321 Religion in America. (3)***fall and spring*

History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.

*General Studies: HU, C, H***REL 322 Malcolm and Martin. (3)***selected semesters*

Examines and contrasts the lives, ministries, contributions, and legacies of Malcolm X and Martin Luther King, Jr.

*General Studies: HU, C***REL 323 Black Religion: A Biographical Approach. (3)***selected semesters*

Examines the experiences, motivations, and contributions of a number of figures associated with African American religion.

*General Studies: HU, C***REL 324 Spirituals and the Blues. (3)***spring*

Multidisciplinary exploration of the African American religious and musical response to the North American diaspora experience. Lecture, discussion.

REL 326 U.S. Latino Religion and Culture. (3)*fall*

Survey of the formative myths, rituals, and symbols of Mexican Americans, Puerto Ricans, and Cuban Americans. Lecture, discussion.

*General Studies: HU, C***REL 330 Native American Religious Traditions. (3)***once a year*

Presents world views and religious thought through the art, architecture, literature, music, mythology, ritual, and folklore of representative tribes in North America.

*General Studies: HU, C***REL 331 History of Native American Religious Traditions. (3)***once a year*

Role of religion in Native American history, including missionization; religious adaptation; and prophetic, messianic, and religious revitalization movements.

*General Studies: L/HU, C, H***REL 332 South American Indian Religions. (3)***selected semesters*

Introduces the sacred stories, ceremonies, and beliefs of Native South American peoples in their historical contexts.

*General Studies: HU, G***REL 343 Taoism. (3)***fall*

Introduces the history, doctrines, and practices of Taoism from the mid-second century CE up to the present. Lecture, discussion.

*General Studies: L/HU, G, H***REL 344 Religion and Values in Japanese Life. (3)***once a year*

Japanese values expressed in the life and annual cycles of the family, local and national identities, and popular culture. Lecture, discussion.

*General Studies: HU, G***REL 345 Asian Religious Traditions. (3)***once a year*

Introduces the major concepts of religious beliefs, rituals, and practices in Hinduism and Buddhism. Lecture, discussion.

*General Studies: HU, G***REL 350 Hinduism. (3)***once a year*

Studies diverse forms of Hinduism through its institutions, literature, folklore, art, and architecture.

*General Studies: L/HU, G***REL 351 Buddhism. (3)***once a year*

Doctrines, practices, and institutions of the Buddhist religion, emphasizing its role in the history and culture of Asian societies.

General Studies: L/HU, G

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

REL 352 Modern Buddhism. (3)

fall

Examines diverse modernities with regard to Buddhist institutions, practices, colonialism and cultural transformations in Asia and the West. Lecture, discussion. Prerequisite: REL 100 or 345 or 351.

REL 355 Japanese Cities and Cultures to 1800. (3)

once a year

Relations among ideas and literary, visual, and performing arts of the ancient aristocracy, medieval samurai, and early modern townspeople. Cross-listed as HUM 310. Credit is allowed for only HUM 310 or REL 355.

General Studies: L/HU, H

REL 365 Islamic Civilization. (3)

fall

Global historical survey of Islamic cultures and societies up to the modern period. Lecture, discussion.

General Studies: HU, H

REL 366 Islam in the Modern World. (3)

spring

Examines the worldwide transformations of Islamic religion, cultures, and societies in the modern period. Lecture, discussion.

General Studies: HU, G, H

REL 369 Women in Islam. (3)

fall

Examines the roles women have played through Islamic history (Middle East) and the changing discourse on gender identity. Lecture, seminar.

REL 371 New Testament. (3)

once a year

Origins and literature of early Christian communities; historical investigations of the types of oral and written tradition in the New Testament.

General Studies: HU

REL 372 Formation of the Christian Tradition. (3)

once a year

Origins, development, and expansion of Christianity; major themes and tensions from the New Testament world to the beginning of the Middle Ages.

General Studies: HU, H

REL 373 Women in Judaism. (3)

spring

Studies the legal, social, and cultural status of Jewish women in various historical and contemporary societies. Cross-listed as WST 372. Credit is allowed for only REL 373 or WST 372.

REL 374 Witchcraft and Heresy in Europe. (3)

selected semesters

Background, origins, and development of the Inquisition; persecution of women and marginal groups. Cross-listed as HST 361. Credit is allowed for only HST 361 or REL 374. Prerequisite: upper-division standing or instructor approval.

General Studies: L/HU, H

REL 377 Religion in Russia. (3)

selected semesters

Examines the history of the various religious traditions of Russia and the former USSR from an interdisciplinary perspective.

General Studies: HU, H

REL 379 Religion, Nationalism, and Ethnic Conflict. (3)

selected semesters

Examines the role of religion in national and ethnic conflict in the contemporary world.

General Studies: HU, G

REL 381 Religion and Moral Issues. (3)

once a year

Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.

General Studies: L/HU

REL 382 Religion, Magic, and Science. (3)

once a year

Relationship and conflict between religion, magic, and science in the West from antiquity to the present. Lecture, discussion.

General Studies: L/HU

REL 383 Origins, Evolution, and Creation. (3)

selected semesters

Examines scientific, mythic, and religious ideas relating to origins (particularly human). Place of antievolutionism and "scientific creationism" in American culture. Lecture, discussion. Cross-listed as BIO 344/HPS 311/HUM 371. Credit is allowed for only BIO 344 or HPS 311 or HUM 371 or REL 383.

REL 384 The Bible and Archaeological Discoveries. (3)

spring

Studies the Bible alongside the stories that architecture, pottery, metalwork, sculpture, tombs, and paintings of the ancient Near East have to tell. May be repeated for credit.

REL 385 Contemporary Western Religious Thought. (3)

selected semesters

Introduces contemporary Jewish and Christian thought. Topics include religion and politics, problem of evil, interpretations of God, and feminist theology.

General Studies: HU

REL 386 America and the Holocaust. (3)

fall

Analyzes the historical and sociopolitical factors that shaped U.S. policy decisions regarding Germany's assault on Europe's Jews.

General Studies: HU/SB

REL 390 Women and Religion. (3)

fall and spring

Role of women in several organized religions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.

General Studies: HU, G

REL 394 Special Topics. (1–4)

selected semesters

REL 400 Approaches to Religion. (3)

fall

Examines the intellectual history of academic study of religion through various theoretical approaches, major themes, and thinkers. Seminar. Prerequisite: REL 305.

REL 405 Problems in Religious Studies. (3)

fall and spring

Selected topics in religious studies; involves students in research interests of instructor. May be repeated for credit when topics vary. Seminar. Prerequisite: at least 9 semester hours of REL courses or instructor approval.

REL 410 Judaism in Modern Times. (3)

selected semesters

Variety of expressions of Judaism and Jewishness in the modern period. Topics may include American Judaism or religious responses to the Holocaust.

General Studies: HU, H

REL 420 Religion in American Life and Thought. (3)

selected semesters

Influence of religion on American society, culture, and ideas; the distinctive character of religion in America. Prerequisite: REL 320 or 321 (or its equivalent).

General Studies: HU

REL 427 American Religious Thought. (3)

selected semesters

Thought of representative American religious thinkers, i.e., Jonathon Edwards, William Ellery Channing, Horace Bushnell, and Reinhold Niebuhr. Prerequisite: REL 320 or 321 (or its equivalent).

General Studies: HU, H

REL 444 Religion in Japan. (3)

once a year

Religion in Japanese history, especially the development of Japanese Buddhism, and religion in the modern transformation of Japan. Prerequisite: instructor approval.

General Studies: HU, G, H

REL 460 Studies in Islamic Religion. (3)

selected semesters

Issues in the interpretation and understanding of Islamic texts, history, society, culture, and rituals. Prerequisites: both REL 365 and Religious Studies major or only instructor approval.

General Studies: HU, G

REL 470 Religion in the Middle Ages. (3)

selected semesters

Religious aspects of medieval life and thought; variety of forms of dissent, heresy, and reform movements from the 4th to 13th centuries.

General Studies: HU, H

REL 471 Reformation and Modern Christianity. (3)

selected semesters

Protestant Reformation to contemporary Christian movements; includes factors in the dissolution of the Medieval Christian synthesis, variety of reform movements and reformation patterns, Catholic counter-reform measures, formation of liberal theology, ecumenical movement, and the World Council of Churches.

General Studies: HU, H

REL 480 Religion and Global Politics. (3)

once a year

Explores the nature and role of religion in international politics in the modern period. Lecture, discussion.

General Studies: G

REL 483 Religion and Science. (3)

spring

Investigates the correlation between science and religion as an interdisciplinary study from a historical perspective. Readings, film, lecture, discussion. Prerequisite: junior standing or instructor approval.

REL 494 Special Topics in Religious Studies. (3)

fall and spring

Open to all students. Topics may be selected from various areas. Prerequisite for freshmen: instructor approval.

REL 498 Pro-Seminar in Religious Studies. (3)

selected semesters

For students with a major or minor emphasis in Religious Studies.

REL 499 Individualized Instruction. (1-3)

fall and spring

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

Department of Sociology

www.asu.edu/clas/sociology

480/965-3546

COOR 5681

Verna M. Keith, Chair

Professors: Bolin, Cobas, Hackett, Jacobson, Kronenfeld, Kulis, Thomas, Weitz

Associate Professors: Agadjanian, Benin, Harlan, Keith, Miller-Loessi, Sullivan

Assistant Professors: Glick, Padilla, Yabiku

Senior Lecturer: Fine

SOCIOLOGY—B.A.

The B.A. degree in Sociology requires a minimum of 30 semester hours of Sociology course work and 15 hours in closely related fields. Of the 30 required hours, a minimum of 18 hours must be upper-division with at least 12 of the 18

upper-division hours taken in residence at ASU Main Campus. All upper-division courses in the major must be completed with a grade of "C" (2.00) or higher. The following courses are required:

SOC 101 Introductory Sociology <i>SB</i>	3
or SOC 301 Principles of Sociology <i>SB</i> (3)	
SOC 390 Social Statistics I <i>CS</i>	3
SOC 391 Sociological Research <i>SB</i>	3
SOC 483 History of Social Thought <i>SB</i>	3
or SOC 486 Contemporary Theory <i>SB</i> (3)	
Total	12

Sociology majors may complete the remaining 18 required hours through selecting one of two options. For a general sociology degree, students must choose six courses that sample at least three of the following seven sociology content areas:

1. family;
2. intergroup relations and social psychology;
3. political/comparative-historical;
4. social problems and processes;
5. stratification/occupations/organization;
6. urban sociology/demography; or
7. race and ethnicity.

If majors desire a more focused preparation in a specialized area, they may complete the remaining 18 hours in one of five focus areas: family issues, urban issues, diversity issues, work/organizational issues, and health issues. Students choosing this option must complete one required focus area course. Other requirements include four courses from a list of optional courses within that focus area and one additional sociology course. Internships (SOC 484) are available within the focus area option for those who qualify.

Information concerning the two options for fulfilling major requirements is available in the Department of Sociology office in SS 321, and on the Internet at www.asu.edu/clas/sociology/undergraduate/advising.

MINOR IN SOCIOLOGY

The minor in Sociology requires 18 hours, of which 12 hours must be upper-division courses, with at least six upper-division hours completed at ASU Main Campus. The required courses are as follows:

SOC 101 Introductory Sociology <i>SB</i>	3
or SOC 301 Principles of Sociology <i>SB</i> (3)	
SOC 391 Sociological Research <i>SB</i>	3
or SOC 483 History of Social Thought <i>SB</i> (3)	
or SOC 486 Contemporary Theory <i>SB</i> (3)	
Total	6

The remaining four courses consist of sociology electives.

L literacy and critical inquiry / MA mathematics / CS computer/statistics/quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

B.I.S. CONCENTRATION

A concentration in sociology is available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 123.

GRADUATE PROGRAMS

The faculty in the Department of Sociology offer programs leading to the M.A. and Ph.D. degrees. See the *Graduate Catalog* for requirements.

SOCIOLOGY (SOC)

SOC 101 Introductory Sociology. (3)

fall, spring, summer

Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change. Credit is allowed for only SOC 101 or 301.

General Studies: SB

SOC 220 Sport and Society. (3)

fall and spring

Examines sports in American society as a source of socialization and an institution where gender, race/ethnicity, and class interact. Prerequisite: SOC 101.

General Studies: SB

SOC 270 Racial and Ethnic Relations. (3)

fall, spring, summer

Problems of minorities in heterogeneous societies. Evaluates theories of prejudice and research dealing with discrimination, desegregation, and assimilation. Lecture, discussion. Prerequisite: SOC 101 or 301 or instructor approval.

General Studies: SB, C

SOC 301 Principles of Sociology. (3)

fall, spring, summer

Intensive and critical analysis of the concepts of sociology. Credit is allowed for only SOC 301 or 101.

General Studies: SB

SOC 312 Sociology of Adolescence. (3)

fall, spring, summer

Cultural values and the social processes that help explain the development of the phenomenon of modern adolescence, including investigation of adolescent subcultures and cross-cultural references. Prerequisite: SOC 101 or 301 or instructor approval.

General Studies: SB

SOC 315 Courtship and Marriage. (3)

fall, spring, summer

Overview of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective. Prerequisite: SOC 101 or 301 or instructor approval.

General Studies: SB

SOC 321 Sociology of Work. (3)

fall and spring

Social and cultural analysis of industry. Occupational roles, status, and social participation of workers. Prerequisite: SOC 101 or 301 or instructor approval.

General Studies: SB

SOC 331 Environmental Sociology. (3)

fall and spring

Analyzes human organizational responses to population growth, technological change, and environmental stressors on both a national and global scale. Prerequisite: SOC 101 or 301 or instructor approval.

General Studies: SB, G

SOC 332 Urban Sociology. (3)

fall and spring

Growth, characteristics, and problems of the modern city. Prerequisite: SOC 101 or 301.

General Studies: SB, G

SOC 333 Population. (3)

fall and spring

Global trends in population growth, composition, and distribution; theories, policies, and impact of population trends on environmental quality and development. Prerequisite: SOC 101 or 301.

General Studies: SB, G

SOC 334 Technology and Society. (3)

fall

Development of technology in relation to society, work, science, the environment, public health, and cultural values related to social change. Lecture, discussion. Prerequisite: SOC 101 or 301 or instructor approval.

General Studies: SB

SOC 340 The Sociology of Deviance. (3)

fall, spring, summer

Sociological analysis of stigmatized behaviors and conditions, including the causes, effects, and management of stigma. Prerequisite: SOC 101 or 301 or instructor approval.

General Studies: SB

SOC 341 Modern Social Problems. (3)

fall, spring, summer

Selected issues such as education, poverty, race relations, crime, drugs, and international issues such as population, environment, global inequality, conflict. Prerequisite: SOC 101 or 301.

General Studies: SB

SOC 352 Social Change. (3)

selected semesters

Patterns of social change, resistance to change, and change-producing agencies and processes. Prerequisite: SOC 101 or 301.

General Studies: SB, G, H

SOC 360 Sociological Psychology. (3)

fall and spring

Interaction patterns between the sociocultural order and individuals; socialization process; norms, roles, and statuses; collective behavior. Prerequisite: SOC 101 or 301.

General Studies: SB

SOC 361 Variant Sexuality. (3)

fall

Sociological research and theories dealing with homosexuality, transvestism, transsexualism, and other variations in sexual orientation and gender identity. Prerequisite: SOC 101 or 301.

General Studies: SB

SOC 363 Men and Masculinity. (3)

selected semesters

Sociological analysis of how masculine identity is defined, negotiated, and variously constructed depending upon class, ethnicity, age, and sexual orientation. Prerequisites: SOC 101 (or 301); WST 100 (or 300).

General Studies: SB

SOC 365 Sociology of Mass Communication. (3)

fall and spring

Sociological exploration of the major mass media as a communicative process in American society. Prerequisite: SOC 101 or 301 or instructor approval.

General Studies: SB

SOC 368 Sociology of Everyday Life. (3)

selected semesters

Examines routine everyday behavior as it relates to problems of social order, control, change, identity, and relationships. Prerequisite: SOC 101 or 301 or instructor approval.

SOC 375 Contemporary American Jewish Identities. (3)

spring

Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs. Lecture, discussion. Cross-listed as REL 318. Credit is allowed for only REL 318 or SOC 375.

General Studies: HU/SB, C

SOC 390 Social Statistics I. (3)*fall, spring, summer*

Descriptive and inferential statistical methods for analysis of social data. Computer applications. Prerequisites: SOC 101 (or 301); a General Studies MA course.

*General Studies: CS***SOC 391 Sociological Research. (3)***fall, spring, summer*

Methods of sociological research, including the fundamental assumptions underlying research and some practical experience in research design, data collection techniques, and data analysis. Prerequisites: both SOC 101 (or 301) and 390 or only instructor approval.

*General Studies: SB***SOC 415 The Family. (3)***fall, spring, summer*

Family considered from the institutional viewpoint; its historical development and its adaptation to a changing culture; the family system in many cultures. Prerequisite: SOC 101 or 301 or instructor approval.

*General Studies: SB***SOC 416 Marriage Problems in Contemporary Society. (3)***spring*

Marital and family problems in today's society from the viewpoint of personal and cultural adjustment. Prerequisites: both SOC 101 (or 301) and an additional 3 hours in sociology or only instructor approval.

*General Studies: L/SB***SOC 417 Family Violence. (3)***fall and spring*

Current research and theories about domestic violence, including child maltreatment, spousal aggression, and courtship violence. Prerequisite: SOC 101 or 301 or instructor approval.

*General Studies: SB***SOC 418 Aging and the Life Course. (3)***fall and spring*

Social aspects of aging. Theoretical and methodological perspectives and problems of aging such as life satisfaction, retirement, and adjustment to role loss. Prerequisite: SOC 101 or 301 or instructor approval.

*General Studies: SB***SOC 420 Sociology of Religion. (3)***selected semesters*

Interrelationship of culture, society, and religion; religion and social stratification; religious, economic, and political institutions; social change and religion. Emphasizes American society and institutions. Prerequisite: SOC 101 or 301 or instructor approval.

*General Studies: L/SB***SOC 421 Education and Society. (3)***fall*

Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society. Prerequisite: SOC 101 or 301 or instructor approval.

*General Studies: SB***SOC 422 Sociology of Complex Organizations. (3)***selected semesters*

Sociological studies of government agencies, industrial firms, labor unions, military establishments, and other large-scale organizations. Prerequisite: 6 hours in sociology (including SOC 101 or 301) or instructor approval.

*General Studies: L/SB***SOC 423 Social Class and Stratification. (3)***spring*

Classical and contemporary theories about who gets what and why. Examines social and economic inequalities by class, gender, and race/ethnicity. Lecture, discussion. Prerequisites: both SOC 101 (or 301) and an additional 3 hours in sociology or only instructor approval.

*General Studies: L/SB***SOC 424 Women and Health. (3)***selected semesters*

Women as health care workers and issues of health, illness, and health care for women. Prerequisite: SOC 101 or 301 or instructor approval.

*General Studies: L/SB***SOC 427 Sociology of Health and Illness. (3)***fall and spring*

Social aspects of illness and sociological analysis of the health care system and its practitioners. Prerequisite: SOC 101 or 301 or instructor approval.

*General Studies: L/SB***SOC 429 Sociology of Law. (3)***selected semesters*

Examines law as an institution; its origins, operations, and consequences. Emphasizes contemporary legal issues and problems. Prerequisite: SOC 101 or 301.

*General Studies: SB***SOC 433 Applied Demography. (3)***spring*

Science of population analysis. Covers techniques for measuring fertility, mortality, migration, and population composition. Lecture, projects. Prerequisite: SOC 101 or 301 or instructor approval.

*General Studies: SB***SOC 446 Sociology of Crime. (3)***fall and spring*

Process of criminalization, exploring the behavior of the definers of crime, and the behavior of those defined as criminals. Prerequisites: both SOC 101 (or 301) and 340 or only instructor approval.

*General Studies: SB***SOC 448 Epidemics and Society. (3)***fall*

How epidemics occur; how they are perceived in society; how epidemics affect society. Prerequisite: SOC 101 or 301 or instructor approval.

*General Studies: SB, G***SOC 451 Comparative Sociology. (3)***selected semesters*

Cross-cultural study of basic social institutions; the methodology of cross-cultural research. Prerequisite: ASB 102 or SOC 101 (or 301) or instructor approval.

*General Studies: SB, G***SOC 456 Political Sociology. (3)***selected semesters*

Social factors associated with voting; nature and structure of the electorate and political parties and the nature of national and international power structure. Prerequisite: SOC 101 or 301 or instructor approval.

*General Studies: SB, G***SOC 464 Sociology of Women. (3)***spring*

Sociological analysis of the development, nature, and consequences of women's position in contemporary society. Lecture, discussion. Prerequisite: SOC 101 or 301 or instructor approval.

*General Studies: L/SB, C***SOC 474 African Americans in Modern Society. (3)***selected semesters*

Social and cultural heritage of black Americans; achievements and current trends. Lecture, discussion. Prerequisite: SOC 101 or 301 or instructor approval.

*General Studies: SB, C***SOC 483 History of Social Thought. (3)***fall, spring, summer*

Social thought in human culture. Background of modern sociology.

Prerequisite: SOC 101 or 301.

*General Studies: SB***SOC 484 Internship. (1-12)***fall and spring*

See Department of Sociology advisor. Topics may include the following:

- Service Learning Fee.

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

SOC 486 Contemporary Theory. (3)
selected semesters

Contemporary issues and crises in social theory with major focus on particular theorists. Ideological factors in theory, philosophical issues, the nature of theory and its relationship with methodology. Prerequisite: SOC 101 or 301 or instructor approval.
General Studies: SB

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

**Department of Speech
and Hearing Science**

www.asu.edu/clas/shs
480/965-2374
COOR 2211

David Ingram, Chair

Professors: S. Bacon, Dorman, D. Ingram, Sinex, Wilcox

Associate Professor: Liss

Assistant Professors: Azuma, Edgar, Gray

Clinical Professors: Mathy, Wiley

Clinical Associate Professors: C. Bacon, Brown, Mintz

Clinical Assistant Professors: K. Ingram, McBride, Wexler

Lecturers: Amann, Barto, Howard, O'Brien, Quinn, Vicencio

SPEECH AND HEARING SCIENCE—B.S.

The B.S. degree in Speech and Hearing Science consists of 43 semester hours of speech and hearing science courses emphasizing the developmental and scientific aspects of language, speech, and hearing. The following courses, or their approved equivalents, are required:

SHS 250 Introduction to Phonetics	3
SHS 310 Anatomical and Physiological Bases of Speech	3
SHS 311 Physical and Physiological Bases of Hearing	3
SHS 367 Language Science <i>SB</i>	3
SHS 375 Speech Science	3
SHS 376 Psychoacoustics	3
SHS 384 Hearing Disorders	3
SHS 401 Introduction to Audiologic Evaluation	3
SHS 402 Modifying Communicative Behavior	3
Choose two from the courses below	6
SHS 431 Developmental Speech Disorders (3)	
SHS 470 Developmental Language Disorders (3)	
SHS 485 Acquired Speech and Language Disorders (3)	
SHS 450 Observation	1
SHS 465 Speech and Language Acquisition <i>SB</i>	3

SHS 496 Aural Rehabilitation	3
Total	40

The remaining speech and hearing science courses to complete the major are determined by the students in consultation with an advisor. A list of approved electives is available through the department. Supporting courses from related fields must include the following or their equivalents:

BIO 201 Human Anatomy and Physiology I <i>SG</i>	4
MAT 170 Precalculus <i>MA</i>	3
PGS 101 Introduction to Psychology <i>SB</i>	3
PHY 101 Introduction to Physics <i>SQ</i>	4
SHS 496 Aural Rehabilitation	3
Total	40

PSY 290 Research Methods is strongly recommended.

MINOR IN SPEECH AND HEARING SCIENCE

The minor in Speech and Hearing Science consists of 24 semester hours with the following classes required:

SHS 105 Introduction to Human Communication Disorders	3
SHS 250 Introduction to Phonetics	3
SHS 310 Anatomical and Physiological Bases of Speech	3
SHS 311 Physical and Physiological Bases of Hearing	3
Choose one from the courses below	3
SHS 367 Language Science <i>SB</i> (3)	
SHS 375 Speech Science (3)	
SHS 376 Psychoacoustics (3)	

The remainder of the 24 credits must come from the following courses:

SHS 320 Facilitating Speech and Language Development in Early Childhood	3
SHS 384 Hearing Disorders	3
SHS 394 ST: Brain, Memory, and Language	3
SHS 401 Introduction to Audiologic Evaluation	3
SHS 402 Modifying Communicative Behavior	3
SHS 431 Developmental Speech Disorders	3
SHS 465 Speech and Language Acquisition <i>SB</i>	3
SHS 470 Developmental Language Disorders	3
SHS 485 Acquired Speech and Language Disorders	3
SHS 496 Aural Rehabilitation	3

B.I.S. CONCENTRATION

A concentration in speech and hearing science is available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 123.

GRADUATE PROGRAMS

The faculty in the Department of Speech and Hearing Science offer programs leading to the M.S. degree in Communication Disorders, the Au.D degree in Audiology, and the Ph.D. degree in Speech and Hearing Science. See the *Graduate Catalog* for requirements.

SPEECH AND HEARING SCIENCE (SHS)

SHS 101 American Sign Language I. (4)*fall and spring*

Basic receptive/expressive conversational skills; basic grammar and syntax rules. Orientation to deafness and deaf culture. Lecture, drill, practice, lab.

SHS 102 American Sign Language II. (4)*fall and spring*

Further development of receptive/expressive conversation skills in ASL; finger spelling. Continued exploration of deaf culture. Lecture, drill, practice, lab. Prerequisite: SHS 101.

SHS 105 Introduction to Human Communication Disorders. (3)*fall and spring*

Introduces hearing, language, and speech problems in children and adults. Lecture, demonstration.

SHS 201 American Sign Language III. (4)*fall and spring*

Continued development of fluency in ASL with emphasis on more abstract concepts and the ability to narrate events. Lecture, discussion, drill, lab. Prerequisite with a grade of "C" (2.00) or higher: SHS 102.

SHS 202 American Sign Language IV. (4)*fall and spring*

Further development of fluency in ASL with emphasis on literature, folklore, and signing narratives with multiple characters. Lecture, discussion, drill, lab. Prerequisite with a grade of "C" (2.00) or higher: SHS 201.

SHS 250 Introduction to Phonetics. (3)*fall*

Introduces English phonetics with emphasis on phonetic transcription, articulation, phonology, and disorders of speech.

SHS 310 Anatomical and Physiological Bases of Speech. (3)*fall*

Noncadaveric study of anatomical systems that underlie human speech and language, including respiration, phonation, articulation, and related nervous system processes. Prerequisite: BIO 201.

SHS 311 Physical and Physiological Bases of Hearing. (3)*fall*

Studies the physical characteristics of sound and of the structure and function of the human auditory system. Prerequisites: BIO 201; PHY 101.

SHS 320 Facilitating Speech and Language Development in Early Childhood. (3)*fall and spring*

Speech and language development and strategies for facilitating communication skills in early childhood educational settings.

SHS 367 Language Science. (3)*fall*

Normative aspects and integration of language structure, comprehension, and production in children and adults.

*General Studies: SB***SHS 375 Speech Science. (3)***spring*

Normative aspects of speech, hearing, and language. Prerequisites: SHS 310, 311.

SHS 376 Psychoacoustics. (3)*spring*

Introduces acoustics, cochlear anatomy and physiology, and the perception of sound. Prerequisite: SHS 311 or instructor approval.

SHS 384 Hearing Disorders. (3)*fall*

Pathologies of the ear and associated peripheral and central hearing disorders: characteristics, management, and effects on communication. Prerequisites: SHS 311, 376.

SHS 394 Special Topics. (1–4)*selected semesters*

Topics may include the following:

- Brain, Memory, and Language

SHS 401 Introduction to Audiologic Evaluation. (3)*fall*

Measurement of the basic audiologic test battery, including audiograms, immittance, masking, and speech recognition. Prerequisites: SHS 311 and 376 and 384 (or their equivalents).

SHS 402 Modifying Communicative Behavior. (3)*fall*

Principles and techniques of modifying speech and language behavior. Prerequisite: SHS 250 (or its equivalent).

SHS 431 Developmental Speech Disorders. (3)*fall*

Introduces the nature of articulation, fluency, resonance, and voice disorders in childhood. Prerequisites: SHS 250 and 310 (or their equivalents).

SHS 450 Observation. (1)*fall and spring*

Opportunity to obtain observation experience at the ASU Speech and Hearing Center or at external sites. Prerequisite: instructor approval.

SHS 465 Speech and Language Acquisition. (3)*spring*

Speech and language development in the normal child. Prerequisite: SHS 367 (or its equivalent).

*General Studies: SB***SHS 470 Developmental Language Disorders. (3)***fall*

Introduces the nature and treatment of language disorders in children. Prerequisite: SHS 465 or instructor approval.

SHS 485 Acquired Speech and Language Disorders. (3)*spring*

Introduces acquired speech and language disorders across the lifespan. Prerequisites: SHS 250, 310.

SHS 494 Special Topics. (1–4)*fall and spring*

May be repeated for credit. Topics may include the following:

- Hearing Disorders. (3)
 - Research. (3)
 - Speech and Language Disorders. (3)
- Prerequisite: instructor approval.

SHS 496 Aural Rehabilitation. (3)*spring*

Approaches to aural rehabilitation of children and adults. Introduces educational audiology and assistive listening devices. Prerequisites: SHS 375 and 376 and 401 (or their equivalents).

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

Women's Studies Program

www.asu.edu/clas/womens_studies

480/965-2358

ECA 209

Mary L. Rothschild, Director

CORE FACULTY

Professors: Koblitz, Rothschild
Associate Professor: Scheiner
Assistant Professors: Anderson, Leong

AFFILIATED FACULTY

African American Studies

Professor: Reyes

Anthropology

Professor: Brandt

Architecture

Associate Professor: Fish Ewan

Art

Professors: Codell, Fahlman, Magenta
Associate Professors: Schleif, Wolfthal

Asian Pacific American Studies

Assistant Professor: de Jesús

Curriculum and Instruction

Professors: Edelsky, Guzzetti

Educational Leadership and Policy Studies

Professor: Turner

English

Professors: Adams, Crowley, Gutierrez, Horan, Nilsen,
Reyes, Rhodes
Associate Professors: Chancy, DeLamotte, Pritchard, Tohe
Assistant Professors: Fox, Parchesky, Webb Peterson
Senior Lecturers: Heenan, Norton

Exercise and Wellness (ASU East)

Associate Professor: Swan

Family and Human Development

Professor: Martin

Geography

Professor: Burns

History

Professors: Fuchs, Lavrin, Warnicke
Associate Professors: Gray, Gullett, Stoner

Human Communication

Professors: Carlson, Nakayama
Associate Professors: Davis, Martinez
Assistant Professor: Park-Fuller

Interdisciplinary Humanities

Assistant Professor: Duncan

Interdisciplinary Studies

Lecturers: Lattouf, Nelson

Justice Studies

Professors: Jurik, Romero, Zatz
Associate Professor: Menjivar
Assistant Professor: Adelman

Kinesiology

Professor Emerita: Wells

Languages and Literatures

Regents' Professor: Foster
Professors: Honegger, Losse, Williams
Associate Professors: Choi, Pritchard, Rees, Tompkins
Assistant Professors: George, Gruzinska, Orlich

Management

Associate Professor: Cook

Music

Professor: Williamson
Assistant Professor: Sullivan

Philosophy

Associate Professor: McGregor

Psychology

Regents' Professors: Eisenberg, Russo
Professor: Chassin
Associate Professor: Saenz

Psychology in Education

Professors: Bernstein, Hackett, Kerr, Moore
Associate Professor: Arredondo

Recreation Management and Tourism

Professor: Allison

Religious Studies

Professor: Feldhaus
Associate Professor: Fessenden

Social Work

Professor: Segal
Associate Professors: Brzuzy, Gerdes, Stromwall
Assistant Professor: Larson

Sociology

Professors: Kronenfeld, Kulis, Weitz
Associate Professors: Agadjanian, Benin, Miller-Loessi

Theatre

Professor: Knapp
Assistant Professor: Woodson

Women's Studies (ASU West)

Professor: Stage

The Women's Studies Program is an interdisciplinary university program housed in the College of Liberal Arts and Sciences. Information on faculty affiliation is provided for reference.

WOMEN'S STUDIES—B.A.

Women's Studies provides our students with an intensive interdisciplinary liberal arts education that enables them to write well, think critically, and analyze problems effectively. Our students take a variety of courses, including a capstone seminar requiring original research and writing, and an internship that helps them prepare for life after college. Original undergraduate research is encouraged, and some courses involve students in studying community problems and formulating policy solutions.

The B.A. degree in Women's Studies consists of 45 semester hours (with a grade of "C" [2.00] or higher), of which 30 must be taken from WST or WSH prefixes or from other prefixes designated as part of the major. The other 15 must be in closely related fields chosen in consultation with an academic advisor. At least 36 of the 45 semester hours required for the major must be completed in upper-division courses.

All Women's Studies majors are encouraged to compile a portfolio to leave on file in the Women's Studies Program office upon graduation.

Required Courses. Students must complete these courses:

WST 100 Women and Society <i>SB, C</i>	3
or WST 300 Women in Contemporary Society <i>SB, C</i> (3)	
WST 377 History of American Feminist Thought <i>L, C</i>	3
WST 378 Contemporary Feminist Theory <i>L, C</i>	3
WST 380 Gender, Race, and Class <i>L/SB, C</i>	3
WST 484 Internship	3
WST 498 PS: Theoretical Issues in Women's Studies	3
Total	18

Electives. Students majoring in Women's Studies must complete four courses (12 semester hours) chosen from the WST or WSH course list.

Related Fields. Students majoring in Women's Studies must complete five courses (15 semester hours) in closely related fields from the WST or WSH course list, cross-listed or interdisciplinary courses, or other courses selected in consultation with a Women's Studies academic advisor.

Students must complete one course chosen from the electives or related fields on nonwestern women. A second course chosen from these same areas must also be completed on either nonwestern, racial or sexual minority women in the United States. For more information, see an academic advisor.

MINOR IN WOMEN'S STUDIES

The Women's Studies minor consists of 18 semester hours, 12 of which must be in the upper division. The following courses are required:

WST 100 Women and Society <i>SB, C</i>	3
or WST 300 Women in Contemporary Society <i>SB, C</i> (3)	
WST 377 History of American Feminist Thought <i>L, C</i>	3
or WST 378 Contemporary Feminist Theory <i>L, C</i> (3)	
Total	6

Twelve additional hours of approved women's studies courses must be taken after consultation with the women's studies advisor.

Students pursuing a minor must register at least one semester before graduation and are encouraged to meet with the women's studies academic advisor early in their course of studies.

CERTIFICATE PROGRAM IN WOMEN'S STUDIES

The certificate program is equivalent to an interdisciplinary minor, consisting of 18 semester hours, and is open to graduate as well as undergraduate students. Students pursuing a certificate must consult with the women's studies advisor. See "Women's Studies," page 330, for a description of the certificate program.

B.I.S. CONCENTRATION

A concentration in women's studies is available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 123.

GRADUATE STUDIES

Although the Women's Studies Program does not offer a graduate degree, it is possible to pursue a graduate degree in some existing programs with a thesis or dissertation topic related to women's studies. For more information, contact a Women's Studies academic advisor.

WOMEN'S STUDIES HUMANITIES (WSH)

WSH 413 Lesbian, Gay, and Gender Studies. (3)

spring
Explores lesbian, gay, bisexual, transgender, and queer experiences in the U.S. and globally, from sociological, psychological, historical, and literary perspectives. Lecture, discussion. Prerequisite: WST 100 or 300 or instructor approval.
General Studies: HU, C

WSH 464 Voices and Visions. (3)

fall and spring
Explores the contributions of visionary women in the humanities; topics vary from semester to semester. May be repeated for credit when topics vary. Lecture, discussion. Prerequisite: WST 100 or 300 or instructor approval.
General Studies: HU, C

WSH 470 Women and Popular Culture. (3)

spring
Interdisciplinary examination of how gender is constructed in popular cultural forms. Lecture, discussion. Prerequisite: WST 100 or 300 or instructor approval.
General Studies: HU, C

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF LIBERAL ARTS AND SCIENCES

WSH 494 Special Topics. (1–4)

fall and spring

Topics include a wide variety of interdisciplinary courses. Check department for current semester offerings.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

WOMEN'S STUDIES (WST)

WST 100 Women and Society. (3)

fall, spring, summer

Interdisciplinary introduction examining critical issues in women's studies. Credit is allowed for only WST 100 or 300.

General Studies: SB, C

WST 191 First-Year Seminar. (1–3)

selected semesters

Restricted to freshmen. Pass/fail. Topics may include the following:

- All About Feminism. (1)

WST 294 Special Topics. (1–4)

selected semesters

Topics may include the following:

- Women and Social Action
Fee.

WST 300 Women in Contemporary Society. (3)

fall, spring, summer

Intensive interdisciplinary examination of such topics as gender roles, work, education, sexuality, politics, health, and law. Credit is allowed for only WST 300 or 100.

General Studies: SB, C

WST 313 Women and Sexuality. (3)

fall and spring

Explores feminist theories about women's sexuality and the relationship of these theories and related research to women's experience. Lecture, discussion. Prerequisite: WST 100 or 300 or instructor approval.

General Studies: SB

WST 360 Women as Healers. (3)

spring

Examines the role of women as caregivers, healers, physicians, midwives, and nurses in different cultures and historical periods. Lecture, discussion.

General Studies: SB, G

WST 372 Women in Judaism. (3)

spring

Studies the legal, social, and cultural status of Jewish women in various historical and contemporary societies. Cross-listed as REL 373. Credit is allowed only for REL 373 or WST 372.

WST 373 Latina/Chicana Issues. (3)

selected semesters

Examines the roles Mexican American, Chicana, and/or Latina immigrant women play historically, socially, and politically in the United States. Prerequisite: WST 100 or 300 or instructor approval.

General Studies: SB, C

WST 375 Women and Social Change. (3)

spring

Combines research and theory on a contemporary social problem with a community action experience focusing on women's social change initiatives. Lecture, field placement. Prerequisite: WST 100 or 300 or instructor approval.

General Studies: SB, C

WST 377 History of American Feminist Thought. (3)

fall

Explores the development of American feminist theory from its roots to 1975. Lecture, discussion. Prerequisite: WST 100 or 300 or instructor approval.

General Studies: L, C

WST 378 Contemporary Feminist Theory. (3)

spring

Contemporary feminist theories and exploration of the intersection of gender, race, ethnicity, and class through critical analysis. Prerequisite: WST 100 or 300 or instructor approval.

General Studies: L, C

WST 380 Gender, Race, and Class. (3)

fall and spring

Explores cultural diversity, class, and gender issues in American social life. Lecture, seminar, analysis papers, and writing. Prerequisite: WST 100 or 300 or instructor approval.

General Studies: L/SB, C

WST 394 Special Topics. (1–4)

fall and spring

Topics may include the following:

- Feminist Voices of Color
- Gender and Performance
- Girlhood and Adolescence
- Women and Religion
- Women Warriors

WST 457 Gender, Culture, and Development. (3)

fall or spring

Economic, cultural, and sociopolitical contexts for understanding women's roles related to health, family, work, education, and politics in developing countries. Prerequisite: 6 hours in social science or instructor approval.

General Studies: L/SB, G

WST 460 Women and the Body. (3)

fall or spring

Interdisciplinary look at how representations of woman as body permeate culture and affect a woman's sense of self. Lecture, discussion. Prerequisite: WST 100 or 300 or instructor approval.

General Studies: SB, C

WST 477 Women and Violence. (3)

fall or spring

Global examination of forms of violence against women at the individual, institutional, and cultural levels, and efforts to control it. Lecture, discussion. Prerequisite: WST 100 or 300 or instructor approval.

General Studies: SB, C

WST 484 Internship. (1–3)

fall and spring

Practical experience to enhance the academic perspectives that emerge from women's studies instruction. Prerequisite: internship coordinator approval.

WST 494 Special Topics. (1–4)

fall and spring

Topics may include the following:

- Women, Science, and Technology

WST 498 Pro-Seminar. (1–7)

fall and spring

Topics may include the following:

- Theoretical Issues in Women's Studies. (3)
Reading and research on important theoretical issues in women's studies. Prerequisite: WST 100 or 300 or instructor approval.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

College of Nursing

nursing.asu.edu

Admission	453
Advising	455
Degrees	455
College Degree Requirements	457
Major Requirements	457
Special Programs	459
General Information	459
Faculty and Courses	460

PURPOSE

The faculty in the College of Nursing acknowledge their responsibility to health care consumers for the preparation of individuals who provide nursing care of professional quality through teaching, research, practice, and service. The purpose of the College of Nursing is to provide educational programs that prepare professional nurses to meet the health care needs of individuals, groups, and communities. To achieve this purpose, the college offers undergraduate, graduate, post-master's, and continuing and extended education programs. Within the context of a liberal education, the degree programs prepare professional nurses who

1. provide the highest-quality health care to individuals, groups, and communities and who critically examine and effectively respond to the changing health care needs of society;
2. conduct research and creative activities that strengthen the knowledge base of the discipline, improve evidence-based nursing practice, and benefit the health of individuals, groups, and communities; and
3. provide service to the community through a range of nursing activities with diverse populations in a variety of settings.

The continuing and extended education program facilitates lifelong learning by providing opportunities for registered nurses (RNs) to enhance and expand their nursing practice to meet the health care needs of various populations and to further their own professional development.

ORGANIZATION

The College of Nursing is organized around two major clinical divisions: adult health/parent-child nursing and community health/psychosocial nursing systems.

The college offers an undergraduate program leading to a Bachelor of Science in Nursing (B.S.N.) degree, a Master of Science (M.S.) degree in Nursing with preparation for

advanced practice in nursing, and continuing and extended education opportunities for RNs, which include RN-B.S.N. and RN-B.S.N.-M.S. programs. A Post-Master's Nurse Practitioner Certificate program is also available.

The college also participates with the University of Arizona and Northern Arizona University in offering the Master of Public Health (M.P.H.) degree and a combined M.S./M.P.H. degree.

ADMISSION

Preprofessional Admission. Students are admitted into the College of Nursing as "premajor Nursing" students. Admission to ASU as a premajor Nursing student does not guarantee admission into the professional program. Admission to the professional program requires a separate application to the College of Nursing and is competitive, with the greatest emphasis placed on grade point average based on selected prerequisite courses.

In addition to meeting the university requirements for admission, it is recommended that students complete one year each of high school chemistry and biology.

Premajor Nursing students are required to seek academic advising each semester through the College of Nursing Student Services Office. This advising includes course planning and information about application materials and deadlines.

Transfer Credits. While ASU accepts transfer credit from other accredited institutions, all transfer credit may not apply toward a B.S.N. degree. Students completing course work at a community college or university other than ASU should consult a College of Nursing academic advisor to plan an appropriate sequence of prerequisite courses and to apply to the professional program. The college has a transfer partnership agreement with the Maricopa Community College District. See a College of Nursing academic advisor for details. The college may not accept transfer credit (especially science) completed more than seven years before the date of application to the professional program.

Professional Program Admission. Individuals interested in applying to the professional program must receive advising from a College of Nursing academic advisor and are required to attend an application workshop. Contact the Student Services Office in the College of Nursing at 480/965-2987 for details. Students are eligible for consideration for admission to the professional program if they meet the following criteria:

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF NURSING

1. regular admission to the College of Nursing at ASU Main as a premajor Nursing student;
2. academic good standing at ASU and in the College of Nursing;
3. minimum prerequisite GPA of 2.75;
4. completion of designated prerequisite courses with an earned grade of "C" (2.00) or higher in each course;
5. completion of all application materials;
6. submission of all required health and immunization requirements;
7. a Test of English as a Foreign Language (TOEFL) score of 550 or higher for international students (see "TOEFL," page 70);
8. receipt of entrance examination scores; and
9. submission of other required materials.

Admission is selective and based on available resources. Meeting the minimum prerequisite GPA does not ensure admission. All qualified applicants may not be admitted. Students admitted to the professional program are required to meet the following additional criteria:

1. proof of CPR certification (Level C American Heart Association Health Care Provider);
2. proof of negative drug screen;
3. completion of all required health and immunization information;
4. eligible for fingerprint clearance card;
5. removal of all ASU admission deficiencies; and
6. other required materials.

Professional program courses are offered at ASU Main, ASU East, and ASU West. Students are asked to specify location preference as part of the application process. Students are expected to complete the professional program on the campus assigned upon admission.

Opportunities for individual, direct, and group patient care are available in a variety of settings: community clinics; health fairs; hospice; geriatric facilities; schools; industries; hospitals; home health; and rehabilitation agencies.

Professional Program Transfer. Students requesting to transfer into the professional program with advanced standing may be required to submit letters of recommendation. Any student enrolled in good standing at any accredited/approved baccalaureate school of nursing within the past two years may apply for admission into the professional program. To be considered for admission to the professional program, transfer students must first be admitted to ASU as premajor Nursing students (see "Undergraduate Admission," page 65) and must also meet all professional program admission requirements. To be considered for advanced standing in the professional program courses, petitions for each course must be completed by the student with accompanied course descriptions and syllabus materials and be approved by the College Standards Committee.

Admission of Registered Nurses (RNs). All RN students are admitted into the College of Nursing as premajor Nursing students. An RN must submit a photocopy of his or her current license to practice nursing as an RN in Arizona. RN

students are responsible for adhering to Arizona State Board of Nursing Rules and Regulations.

Alternatives are available to RNs to facilitate their progress in the program, including credit by examination, substitution of previously completed nursing courses for specified ASU nursing courses, and transfer of general education course work completed at other accredited colleges and universities. All RN students must consult with an advisor in planning their program of study. See "Professional Program Admission," page 453, for admission criteria into the B.S.N. professional program. Registered nurses are admitted into the RN-B.S.N. program twice a year, in January and in August.

Additional admission criteria required for application to the RN-B.S.N.-M.S. program track include submission of

1. GRE scores;
2. current résumé;
3. statement of career goals;
4. three references (forms provided);
5. interview;
6. minimum prerequisite GPA of 3.0; and
7. other required materials.

RNs are accepted into the RN-B.S.N.-M.S. program track once a year (in January).

Readmission to the Professional Program. Students who have not been in continuous enrollment must file a petition requesting readmission to the professional program and must provide the following documents:

1. proof of current enrollment or readmission to ASU and the College of Nursing in good standing;
2. transcripts from all colleges attended; and
3. all other admission requirements as outlined under "Admission," page 453.

Arizona State Board of Nursing Requirement. To be eligible to write the National Council Licensure Examination for Registered Nurses (NCLEX-RN), a student must have a high school diploma or GED certificate as well as proof of graduation from an approved nursing program. Arizona State law prohibits an individual convicted of a felony from applying for nursing licensure or certification until five years after the date of absolute discharge of the sentence. Application for, and passage of, the NCLEX-RN is the sole responsibility of the student.

College Health Requirements. Students admitted/enrolled in the professional program are responsible for fulfilling the requirements of the health policies of the College of Nursing. The student is responsible for providing proof to the College of Nursing Student Services Office of having met these requirements before enrollment in the professional program courses. These health policies include the following requirements:

1. proof of measles (rubeola), mumps, and rubella immunization (two MMRs or appropriate titers);
2. proof of annual tuberculosis screening;
3. completed series of hepatitis B vaccine;

4. current American Heart Association Level C CPR Certification;
5. proof of tetanus, diphtheria immunization (TD);
6. proof of varicella (chicken pox) immunization; and
7. proof of negative drug screen.

A student may not participate in any clinical experience without meeting these requirements.

An annual flu vaccine is also recommended; other health information may be required. While the Hepatitis A vaccination is not required for admission, information on who might benefit from the vaccination is available from the College of Nursing Student Services Office.

Fingerprint Clearance. All College of Nursing students admitted to the professional program must submit a photocopy of their fingerprint clearance card to the Student Services Office by the first day of class.

Essential Functions. Students admitted to the professional program are expected to meet the Essential Functional Abilities of the Undergraduate Nursing Student. Essential functions for this program include gathering data through the senses (hearing, seeing, etc.), synthesizing information from a variety of sources, making decisions regarding patient care, and performing necessary physical and mental activities to ensure safe care. For complete details, contact an advisor in the Student Services Office at NUR 108, or call 480/965-2987.

ASU Health Requirements. See “Undergraduate Admission,” page 65, and “Immunization Requirements,” page 71.

Professional Liability Insurance. It is highly recommended that students carry their own professional liability insurance when enrolled in clinical nursing courses.

Health and Accident Insurance. It is strongly recommended that all students carry their own health and accident insurance. Some clinical agencies require students to have current health insurance. See the *Undergraduate Student Handbook*. Each student is personally responsible for costs related to any accident or illness during or outside of school activities.

Automobile Insurance. Students are required by state law to carry automobile insurance. Students are responsible for transportation to and from clinical sites. Extensive travel may be required for selected clinical experiences.

ADVISING

While the College of Nursing provides academic advising, *it is ultimately the responsibility of each student to fulfill academic and program requirements*. Advisors are available by appointment in the College of Nursing Student Services Office. Visit NUR 108, or call 480/965-2987 (see “Student Services,” page 459). Advisors assist students with program planning, registration, preparation of needed petitions, verification of graduation requirements, referrals to university and community resources, and career planning.

Student responsibilities include following university guidelines regarding submission of transcripts from all colleges other than ASU, obtaining the necessary signatures or

computer verifications required by the university, and following university procedures for matriculation.

Mandatory Advising. All premajor Nursing students are required to meet with an academic advisor before registering for each semester of classes. All students on probation are required to meet with an advisor to plan strategies for improving their academic standing.

Declaration of Graduation. Students following the curriculum requirements of the 1996–1998 or later catalog editions must file a Declaration of Graduation form using the Degree Audit Reporting System during enrollment in the first semester of the professional program.

Student Employment. Each of the four semesters in the professional program is composed of 16 semester hours. Seven to eight of these semester hours reflect three days in clinical laboratory practicum experience. The remaining eight to nine semester hours reflect classroom hours with preparation and study requiring additional time and effort. It is suggested that any other extracurricular activities or employment be kept at a minimum.

DEGREES

Nursing—B.S.N.

The completion of the curriculum leads to a Bachelor of Science in Nursing (B.S.N.) degree. The purpose of the program is to prepare beginning professional nurses, who possess the theoretical foundation and the clinical competence, to function in various health care settings. The graduate is prepared to deliver nursing care services to individuals, families, population groups, and communities. The undergraduate program provides students with a foundation for graduate studies in nursing at the master’s level.

Program objectives for the undergraduate curriculum are directed toward preparation of graduates with generalist abilities. Based on theoretical and empirical knowledge from nursing, the humanities, and physical, biological, and behavioral sciences, graduates are prepared to

1. combine theoretical knowledge from the sciences, humanities, and nursing as a base for critical thinking in professional nursing practice and develop an understanding of client, health environment, and nursing;
2. organize the nursing process to provide safe, competent, and effective nursing care using principle-based communication, technical/psychomotor, teaching, management, and therapeutic skills;
3. design and generate comprehensive therapeutic nursing care in partnership with individuals, families, groups, and communities, including those who are culturally diverse and/or vulnerable;
4. generate their own professional practice that focuses on health promotion, health restoration, health maintenance, and illness care from a holistic perspective;

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See “General Studies,” page 91.

COLLEGE OF NURSING

5. analyze and apply research findings to nursing practice and identify nursing research problems;
6. display values and behavior consistent with the culture of professional nursing;
7. display personal and leadership characteristics appropriate for professional nursing practice;
8. display responsibility and accountability for professional nursing practice;
9. collaborate with nurses, other health care providers, and clients in the delivery of holistic care that is responsive to changing needs and societal trends; and
10. analyze current nursing and health care services and trends, and identify future health care needs.

Nursing—RN Programs

Courses have been designed to expand the knowledge base of the RN. Practice experiences in home health, community health, and leadership prepare RNs for roles in the expanding health care arena. Programs of study are developed and implemented that reflect individual capabilities, prior educational learning experiences, and career goals of RNs. Faculty and academic advisors work with RN students to maximize learning experiences and plan a program that meets their unique needs and interests.

Two program tracks are available for RNs. The RN-B.S.N. *only* and the RN-B.S.N.-M.S. program tracks are structured to provide an accessible, accelerated, and predictable pathway through the program.

RN-B.S.N. Only. The RN-B.S.N. *only* program track offers RNs the opportunity to complete upper-division professional nursing courses in one calendar year in a program featuring reasonable costs, predictable year-round course scheduling, reduced in-class time, and a variety of instructional delivery methods, including Web-enhanced and Web-based courses. Completion of upper-division general education requirements may require additional time beyond the one year of professional nursing courses. Satisfactory completion of all general education and nursing prerequisite courses with a grade of “C” (2.00) or higher and an earned minimum prerequisite GPA of 2.75 is required. RNs are accepted into the RN-B.S.N. *only* program track twice a year (January and August). See “Admission of Registered Nurses (RNs),” page 454.

RN-B.S.N.-M.S. The RN-B.S.N.-M.S. program track, designed for highly motivated and experienced RNs, reflects an expansion of the RN-B.S.N. *only* option. It provides for more rapid progression to graduate education that builds on the existing undergraduate curriculum and enables RN students to take selected graduate courses (earning a grade of “B” [3.00] or higher) that apply toward their baccalaureate degree. Satisfactory completion of all general education and nursing prerequisite courses with a grade of “C” (2.00) or higher and an earned minimum prerequisite GPA of “B” (3.00) is required. See “Admission of Registered Nurses (RNs),” page 454.

The RN to master’s degree program requires students to complete a minimum of 30 semester hours with a grade of “B” (3.00) or higher in all courses in the master’s program

of study. Graduate courses completed toward the B.S.N. degree are not applicable toward this requirement.

Nursing—M.S.

The faculty in the College of Nursing offer a program leading to an M.S. degree in Nursing with concentrations in

1. adult health nursing with tracks in the primary care of chronically ill adults or the care of acutely ill;
2. community health nursing with additional options of a dual Master of Public Health degree;
3. psychiatric/mental health nursing;
4. family health nursing;
5. women’s health; and
6. parent-child nursing with the tracks in the childbearing family, primary or acute care nursing of children, and neonatal program.

The program requires a minimum of 40 semester hours with an earned grade of “B” (3.00) or higher in all courses in the program of study. Students in the nurse practitioner options are required to complete additional semester hours. Requirements for this program are described in the *Graduate Catalog*. Persons interested in applying for admission to the program should write to the Graduate College for a *Graduate Catalog* and application form (see “Admission to the Graduate College,” page 496) and contact the College of Nursing Student Services Office.

Public Health—M.P.H.

The School of Health Administration and Policy and the College of Nursing, at ASU, in conjunction with the University of Arizona and Northern Arizona University, offer courses leading to the Master of Public Health (M.P.H.) degree. Two concentrations are offered: (1) community health practice (coordinated by the College of Nursing) and (2) health administration and policy (coordinated by the School of Health Administration and Policy). Students may pursue a joint M.S. in Nursing/M.P.H. degree. For more information, see the *Graduate Catalog*.

ASU EXTENDED CAMPUS

The College of Extended Education was created in 1990 to extend the resources of ASU throughout Maricopa County, the state, and beyond. The College of Extended Education is a university-wide college that oversees the ASU Extended Campus and forms partnerships with other ASU colleges, including the College of Nursing, to meet the instructional and informational needs of a diverse community.

The ASU Extended Campus goes beyond the boundaries of the university’s physical campuses to provide access to quality academic credit and degree programs for working adults through flexible schedules; a vast network of off-campus sites; classes scheduled days, evenings, and weekends; and innovative delivery technologies including television, the Internet, and Independent Learning. The ASU Extended Campus also offers a variety of professional continuing education and community outreach programs.

For more information, see “ASU Extended Campus,” page 689, or access the Web site at www.asu.edu/xed.

UNIVERSITY GRADUATION REQUIREMENTS

In addition to fulfilling college and major requirements, students must meet all university graduation requirements. For more information, see “University Graduation Requirements,” page 87.

First-Year Composition Requirement

Completion of both ENG 101 and 102 or ENG 105 or equivalent with a grade of “C” (2.00) or higher is required for graduation from ASU in any baccalaureate degree program.

General Studies Requirement

All students enrolled in a baccalaureate degree program must satisfy a university requirement of a minimum of 35 semester hours of approved course work in General Studies, as described in “General Studies,” page 91. Note that all three General Studies awareness areas are required. Consult an advisor for an approved list of courses. Many of the university General Studies requirements may be met through completion of College of Nursing course requirements. See an academic advisor for details. General Studies courses are listed in the “General Studies” table, page 94, in the *Schedule of Classes*, and in the *Summer Sessions Bulletin*.

COLLEGE DEGREE REQUIREMENTS

The B.S.N. degree requires 120 semester hours.

Prerequisite Course Requirements

The following courses must be completed before enrolling in the professional program. Completion of these courses does not ensure admission to the professional program. RN students should refer to “RN-B.S.N. Degree Requirements,” on this page.

BIO 201 Human Anatomy and Physiology I <i>SG</i>	4
BIO 202 Human Anatomy and Physiology II	4
CDE 232 Human Development <i>SB</i>	3
CHM 101 Introductory Chemistry <i>SQ</i>	4
ENG 101 First-Year Composition	3
ENG 102 First-Year Composition	3
HCR 210 Clinical Health Care Ethics <i>HU</i>	3
HCR 220 Health Care Organizations <i>H</i>	3
HCR 230 Culture and Health <i>C, G</i>	3
HCR 240 Human Pathophysiology	4
MIC 205 Microbiology <i>SG</i>	3
MIC 206 Microbiology Laboratory <i>SG</i>	1
NTR 241 Human Nutrition	3
PGS 101 Introduction to Psychology <i>SB</i>	3
PHI 103 Principles of Sound Reasoning <i>L/HU</i>	3
CS statistics elective	3
HU/SB elective	3
MA course	3
Total prerequisites	56

MAJOR REQUIREMENTS

The Nursing major requirements are completed after admission to the professional program. All practice courses are graded satisfactory/fail. RN students should refer to “RN-B.S.N. Degree Requirements,” on this page.

Nursing Core Courses

Junior Year

First Semester

NUR 341 Theory I: Health Integrity	4
NUR 351 Pharmacology in Nursing	3
NUR 361 Professional Development I	2
NUR 381 Nursing Practice I	7
Total	16

Second Semester

NUR 342 Theory II: Health Integrity and Alterations	5
NUR 362 Professional Development II: Nursing Research <i>L</i>	3
NUR 382 Nursing Practice II	8
Total	16

Senior Year

First Semester

NUR 441 Theory III: Health Integrity and Alterations	6
NUR 461 Professional Development III: The Art of Nursing <i>HU</i>	3
NUR 481 Nursing Practice III	7
Total	16

Second Semester

NUR 442 Theory IV: Health Integrity and Alterations	3
NUR 443 Theory V: Leadership and Management	3
NUR 462 Professional Development IV	2
NUR 482 Nursing Practice IV	8
Total	16
Nursing core total	64

Each semester of courses is prerequisite to subsequent semesters. See an advisor for current program information.

RN-B.S.N. DEGREE REQUIREMENTS

Prerequisite Course Requirements

BIO 201 Human Anatomy and Physiology I <i>SG</i>	4
BIO 202 Human Anatomy and Physiology II	4
CDE 232 Human Development <i>SB</i>	3
CHM 101 Introductory Chemistry <i>SQ</i>	4
ENG 101 First-Year Composition	3
ENG 102 First-Year Composition	3
HCR 240 Human Pathophysiology*	4
MIC 205 Microbiology <i>SG</i>	3
NTR 241 Human Nutrition	3
NUR 341 Theory I: Health Integrity*	4
NUR 342 Theory II: Health Integrity and Alterations*	5
NUR 351 Pharmacology in Nursing*	3
NUR 361 Professional Development I*	2
NUR 381 Nursing Practice I*	7
NUR 382 Nursing Practice II*	8
PGS 101 Introduction to Psychology <i>SB</i>	3
C, H elective	3
CS statistics elective	3
HU elective	3
MA course	3
Total prerequisites	75

* For alternatives, see an advisor.

L literacy and critical inquiry / *MA* mathematics / *CS* computer/statistics/quantitative applications / *HU* humanities and fine arts / *SB* social and behavioral sciences / *SG* natural science—general core courses / *SQ* natural science—quantitative / *C* cultural diversity in the United States / *G* global / *H* historical / See “General Studies,” page 91.

COLLEGE OF NURSING

General Education Courses

Electives (upper division)	7
G course (upper division).....	3
Total	10

Professional Nursing Courses for RNs. The following nursing courses are taught over a period of 12 months. Theory classes are held one day a week for six months. Practice and theory courses require a commitment of three days a week over the remaining six months.

NUR 362 Professional Development II: Nursing Research <i>L</i>	3
NUR 391 Registered Nurse Mobility I: Professional Development <i>L</i>	3
NUR 392 Registered Nurse Mobility II: Health and Wellness	3
NUR 440 Theory III: Health Integrity and Alterations for RNs	6
NUR 443 Theory V: Leadership and Management.....	3
NUR 444 Theory IV: Health Integrity and Alterations for RNs	3
NUR 461 Professional Development III: The Art of Nursing <i>HU</i>	3
NUR 462 Professional Development IV	2
NUR 495 Community Health/Home Health Practice for RNs.....	4
NUR 496 Leadership and Management Practice for RNs	5
Total	35
General elective total	10
Nursing core (RN) total	45

The sequential progression of courses for the RN-B.S.N. is as follows:

1. NUR 391
2. NUR 392
3. NUR 461
4. NUR 362
5. NUR 440
6. NUR 495
7. NUR 444
8. NUR 443
9. NUR 496
10. NUR 462

RNs interested in pursuing the RN-B.S.N.-M.S. track should contact an advisor in the College of Nursing Student Services Office.

ACADEMIC STANDARDS

Students are admitted into the College of Nursing as pre-major Nursing students and are subject to the general standards of academic good standing at the university. However, students who maintain standards of academic good standing do not necessarily qualify for admission into the professional program.

Consideration for admission into the professional program is contingent on achieving at least a "C" (2.00) in all prerequisite courses and earning a minimum GPA of 2.75 in prerequisite courses. In addition, a grade of "C" (2.00) or higher is required in all course work for the degree except in nursing practice courses where a designation of a "Y" (satisfactory) grade is required.

Once admitted into the professional program, students are allowed only one nursing course failure within the program.

The second failure in a nursing course leads to an automatic disqualification from the College of Nursing.

Probation and/or disqualification is in accordance with university policies. Academic dishonesty is not tolerated in any course and is subject to specific College of Nursing policies and procedures.

GRADING POLICY FOR NURSING COURSES

Within the undergraduate program, grades are assigned to reflect levels of achievement in relation to course objectives. Students who do not complete a required nursing course satisfactorily, receiving a grade of "D" (1.00) or "E" (0.00) (failing) or a mark of "W" (withdrawal), are not eligible to progress in the professional program. A student who withdraws from a course with a failing grade reported as an "E3," "E4," or "E9" is considered to have failed the course.

Any petition for curriculum adjustment, course substitution, overload, readmission to a nursing course, or readmission to the professional program must be approved by the College Standards Committee.

Withdrawal is in accordance with ASU withdrawal policy. Students are responsible for completing the university withdrawal procedure. To be considered for reenrollment in a professional program course, a completed petition must be submitted and approved by the College Standards Committee. See an academic advisor for assistance.

An incomplete in a required nursing course must be satisfactorily removed before progression in the professional program is permitted. A grade of "I" is not allowed in clinical courses. See "Grading System," page 79, for university policy.

Audited courses are not accepted as course credit in the minimum 120-semester-hour requirement for graduation.

STUDENT RESPONSIBILITIES

Health. Students in the College of Nursing who exhibit or demonstrate a lack of physical and/or mental health necessary to function effectively as a professional nurse may be required to complete a health examination and have the results made available to the College Standards Committee. Students whose health, behavior, and/or performance have been questioned are reviewed for continuation in nursing courses by the College Standards Committee. The student may appear in person before the committee and personally present information relevant to the committee's review.

Information may also be presented in writing without making a personal appearance.

Professional Standards. Students are held to the professional standards reflected in the American Nurses' Association Code of Ethics for Nurses. Professional behavior and appearance are required during all nursing course activities.

Student Transportation. Students are responsible for their own transportation to and from health agencies and other selected experience settings, such as home visits to clients. Extensive travel may be required for selected clinical experiences.

Laboratory Fees. In several nursing laboratory and clinical practice courses, students are provided an opportunity to

practice and perfect nursing skills before contact with clients. These courses require an extensive use of equipment and supplies from the Nursing Learning Resource Center. Accordingly, students are assessed a fee for the following courses: NUR 341, 342, 381, 382, 441, 442, 481, and 482. Consult with an advisor for information on laboratory fees for Nursing courses. Fees may be assessed on other courses. See the current *Schedule of Classes*.

SPECIAL PROGRAMS

Honors Program. The Nursing Honors Program provides opportunities for academically talented nursing students to engage in educational enrichment opportunities. The program focuses on students in the professional program; however, opportunities are available in lower-division courses. For students pursuing upper-division honors work, this enriched learning experience begins in the junior year. Honors course work, consisting of at least 18 hours of upper-division honors credit, offers a challenging curriculum. Honors students are guided to complete honors credit in courses that complement their academic and career goals. Students interested in pursuing the Nursing Honors Program are encouraged to seek advising in the College of Nursing Student Services Office. Once admitted to the professional program, students receive advising from the honors coordinator.

For more information, call 480/965-2987 or stop by the Student Services Office at NUR 108. Interested students should also call the Barrett Honors College at 480/965-2359.

ASU West. ASU West hosts the professional nursing program courses. To be eligible to enroll in the professional courses at ASU West, students must be admitted to the College of Nursing at ASU Main, submit all required material for admission to the professional program, and be admitted to the college's undergraduate professional program.

Continuing and Extended Education Program. The Continuing and Extended Education Program presents a variety of credit and noncredit offerings at ASU campuses, employer work sites, or electronically. These offerings are designed to assist practicing registered nurses in maintaining and enriching their competencies, broadening their scientific knowledge base, and enhancing their skills in adapting to the changing health care environment. Programs are organized in response to both the health care needs of populations and the learning needs of nurses engaged in a variety of professional roles and clinical specialties. Some offerings are multidisciplinary and are open to non-RNs. For descriptions of continuing and extended education offerings, call the Continuing and Extended Education Program, College of Nursing, at 480/965-7431, send e-mail to conceep@asu.edu, or access the program's Web site at nursing.asu.edu/ce.

Community Health Services. The College of Nursing administers a Community Health Services Clinic located in Scottsdale, Arizona. Nurse practitioners provide primary care with an emphasis on promotion of wellness to families and individuals of all ages. Students in the College of Nursing may receive health care through the clinic for a fee. Stu-

dents may obtain immunizations required for admission to the professional program at the clinic's facility. The facility also serves as a learning site for both master's and baccalaureate nursing students.

GENERAL INFORMATION

Student Services. The Student Services Office in the College of Nursing provides academic advising, general advising, and referral to university resources. The staff of the Student Services Office is available to help students with a variety of concerns related to academic or personal issues. Advising appointments are available at three locations: ASU West, Community Services Building, and NUR 108. Prospective students wanting more information on College of Nursing programs or wanting to schedule an advising appointment should contact the College of Nursing Student Services Office at 480/965-2987.

Scholarship and Financial Aid. For information on scholarships and loans, see "Financial Aid," page 59. Information about scholarship and loans for nursing students may be obtained from the Student Financial Assistance Office or the College of Nursing Student Services Office.

Learning Resources. The Learning Resource Center (LRC) contains a clinical simulation laboratory with a full range of simulated medical equipment and manikins, a complex care unit, and a health assessment lab at ASU Main and the Community Services Building. The LRC materials include nursing course reference materials, selected nursing textbooks, nursing theses and applied projects, audiovisual equipment, videos, models, and other visual aides. In the computer lab, computers with Microsoft Office Suite are available for nursing students, as well as a variety of computer software related to nursing and health care. Selected resources are available for checkout. The LRC is staffed to assist students during regular semester schedules.

Clinical Facilities. Learning experiences with patients/clients and families are provided under the supervision of qualified faculty in cooperation with a variety of federal, state, county, private, and other agencies. The College of Nursing has contracts with more than 300 agencies to provide clinical and practice experience for students, operates its own unique nurse-managed clinic in a community setting, and offers experiences in a variety of other nurse-managed health services facilities. Various clinical laboratory facilities are available to students in this essential component of the program.

Student Activities. All ASU students are members of the Associated Students of ASU (ASASU) and participate in campus activities of interest to them. The student government of the university, ASASU, has a strong presence and offers a variety of services and activities. It is the official representative of the student body in matters of governance and budgeting.

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF NURSING

College Council of Nursing Students. The College Council of Nursing Students (CCNS) is a member of ASASU and serves as the governing body of all student activities in the college. The council acts as a liaison between the Graduate Nurse Organization (GNO), the Student Nurses' Association (SNA), and the Nursing Students for Ethnic and Cultural Diversity. The CCNS provides for communication, cooperation, and understanding among undergraduate students, graduate students, and faculty and represents the college in university and nonuniversity affairs.

Graduate Nurse Organization. GNO is the coordinating body for nursing students in the graduate program. GNO provides programs, information, and orientation services.

Student Nurses' Association. SNA is a professional nursing organization. By being a member of SNA, the student belongs to the National Student Nurses' Association (NSNA), which is the student counterpart of the American Nurses Association for RNs. NSNA provides means for financial assistance, career planning, a voice in Washington, an opportunity for involvement, and low-cost comprehensive malpractice insurance.

Nursing Students for Ethnic and Cultural Diversity. This organization was formed in 1989 to provide a network of information and support for students interested in issues of cultural awareness and diversity.

Sigma Theta Tau International. The Beta Upsilon chapter of Sigma Theta Tau International (STTI) was chartered at the College of Nursing in 1976. Membership in STTI is an honor conferred on undergraduate and graduate students who have demonstrated outstanding academic and professional achievement.

ROTC Program. Students pursuing a commission through the Air Force or Army ROTC programs must take from 12 to 20 hours in the Department of Military Science. To preclude excessive course overloads, these students should plan on an additional one to two semesters and/or summer school to complete all degree requirements of the college.

College of Nursing

nursing.asu.edu
480/965-3244
NUR 344

Professors: Fleury, Komnenich, Mattson

Associate Professors: Alpers, Brillhart, Cesarotti, Dirksen, Ismeurt, Killeen, McCarthy, Ruiz, Sousa

Assistant Professors: Hrabe, McGrath, Pickens, Shearer, Tann

Clinical Professor: Bell

Clinical Associate Professors: Adams, Armbruster, Fargotstein, Hagler, Jasper, W. Johnson, Kastenbaum, Link, Morris, Nunez, Stillwell, White

Clinical Assistant Professors: P. Johnson, Maxwell, Sayles, Wotring

COMMUNITY HEALTH PRACTICE (CHP)

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

HEALTH CARE RELATED (HCR)

HCR 210 Clinical Health Care Ethics. (3)

fall, spring, summer

Health care ethics emphasizing analysis and ethical decision making at clinical and health policy levels for health care professionals.

General Studies: HU

HCR 220 Health Care Organizations. (3)

fall and spring

Overview of United States health care delivery systems; financing, health policy, basic principles of budgeting, cost-benefit analysis, and resource management. Cross-listed as HSA 220. Credit is allowed for only HCR 220 or HSA 220.

General Studies: H

HCR 230 Culture and Health. (3)

fall and spring

Cultures of diverse groups and health/illness. Cross-cultural communication, awareness of own cultural influences, indigenous and alternative healing practices.

General Studies: C, G

HCR 240 Human Pathophysiology. (4)

fall and spring

Chemical, biologic, biochemical, and psychological processes used in study of structural and functional alterations in health with selected therapeutics. Prerequisites: BIO 201 and 202 and MIC 205 and 206 (or their equivalents).

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

NURSING (NUR)

NUR 314 Health Assessment for Registered Nurses. (3)

spring

Introductory knowledge and skills for systematic physical, psychosocial, and developmental nursing assessment over the life span. 2 hours lecture, 3 hours lab. Prerequisite: admission to graduate Nursing program.

NUR 341 Theory I: Health Integrity. (4)*fall and spring*

Concepts related to health integrity with focus on individual clients. Fee. Prerequisite: admission to professional Nursing program. Corequisite: NUR 381. Pre- or corequisites: NUR 351, 361.

NUR 342 Theory II: Health Integrity and Alterations. (5)*fall and spring*

Concepts related to selected alterations in health integrity with focus on individuals, families, and groups. Fee. Prerequisite: Junior I courses. Corequisite: NUR 382. Pre- or corequisite: NUR 362.

NUR 351 Pharmacology in Nursing. (3)*fall and spring*

Foundations of pharmacological interventions. Prerequisite: admission to professional Nursing program.

NUR 361 Professional Development I. (2)*fall and spring*

Introduces professional nursing roles and responsibilities. Prerequisite: admission to professional Nursing program.

NUR 362 Professional Development II: Nursing Research. (3)*fall and spring*

Introduces concepts and issues in nursing research. Emphasizes quantitative and qualitative research processes, examination of nursing research literature. Prerequisite: Junior I or admission to RN-B.S.N. program.

*General Studies: L***NUR 381 Nursing Practice I. (7)***fall and spring*

Applies health assessment, nursing process, and basic skills to promote and maintain health integrity of individual clients. Lab, clinical experience. Fee. Prerequisite: admission to professional Nursing program. Corequisite: NUR 341. Pre- or corequisites: NUR 351, 361.

NUR 382 Nursing Practice II. (8)*fall and spring*

Applies nursing process with selected individuals, families, and groups experiencing alterations in health integrity. Lab, clinical experience. Fee. Prerequisite: Junior I. Corequisite: NUR 342. Pre- or corequisite: NUR 362.

NUR 391 Registered Nurse Mobility I: Professional Development. (3)*fall and spring*

Historical, philosophical, and theoretical bases for professional nursing practice. Enhancement of critical inquiry skills through exploration of selected issues. Prerequisite: admission to RN-B.S.N. program.

*General Studies: L***NUR 392 Registered Nurse Mobility II: Health and Wellness. (3)***fall and spring*

Concepts of health integrity and community-based practice and professional nursing roles. Corequisite for RNs: NUR 391.

NUR 394 Special Topics. (1–4)*selected semesters*

Topics may include the following:

- Cultural Competence and Health. (3)

summer in even years

Relationship between cultures and health, illness, communication, healing practices, child rearing, aging, and end of life. Lecture, cooperative learning strategies, immersion community experience.

NUR 440 Theory III: Health Integrity and Alterations for RNs. (6)*fall, spring, summer*

Concepts related to health integrity and alterations with focus on individuals, families, groups, aggregates, and communities. Prerequisite for RNs: NUR 392.

NUR 441 Theory III: Health Integrity and Alterations. (6)*fall, spring, summer*

Concepts related to health integrity and alterations with focus on individuals, families, groups, aggregates, and communities. Fee. Prerequisite: Junior II. Corequisite: NUR 481. Pre- or corequisite: NUR 461.

NUR 442 Theory IV: Health Integrity and Alterations. (3)*fall, spring, summer*

Advanced concepts related to health integrity and alterations in that integrity, with focus on selected client populations. Fee. Prerequisite: Senior I. Corequisites: NUR 443, 482. Pre- or corequisite: NUR 462.

NUR 443 Theory V: Leadership and Management. (3)*fall and spring*

Selected theories and concepts of organizations, management, leadership with focus on nursing management and leadership in health care organizations. Prerequisite: Senior I. Corequisites: NUR 442, 482. Pre- or corequisite: NUR 462.

NUR 444 Theory IV: Health Integrity and Alterations for RNs. (3)*fall, spring, summer*

Advanced concepts related to health integrity and alterations in that integrity, with focus on selected client populations. Prerequisite for RNs: NUR 392.

NUR 450 School Nursing Practice. (3)*summer*

Role of the professional nurse in planning, implementation, and evaluation of the school health program. Prerequisite: RN license.

NUR 451 Health Assessment of the Child. (3)*summer*

Maintenance of good health in the school-aged child using health assessment and promotion techniques. Lecture, discussion, self study, demonstration. Prerequisite: RN license.

NUR 452 Nursing of Children with Developmental Disabilities. (3)*summer*

Congenital and acquired physical and mental developmental disorders, including the evaluation of child and family and community resources. Prerequisite: RN license.

NUR 461 Professional Development III: The Art of Nursing. (3)*fall and spring*

Explores the aesthetic, ethical, and personal patterns of knowing in nursing. Prerequisite: Junior II or admission to RN-B.S.N. program.

*General Studies: HU***NUR 462 Professional Development IV. (2)***fall and spring*

Focuses on role transition to professional nursing. Prerequisite: Senior I. Prerequisite for RNs: NUR 495.

NUR 481 Nursing Practice III. (7)*fall and spring*

Applies concepts and clinical practice related to health integrity and alterations with focus on individuals, families, groups, aggregates, and communities. Lab, clinical experiences. Fee. Prerequisite: Junior II. Corequisite: NUR 441. Pre- or corequisite: NUR 461.

NUR 482 Nursing Practice IV. (8)*fall and spring*

Capstone course with focus on synthesis and application of patterns of knowing and leadership, management concepts in collaborative nursing practice. Lab, clinical experiences. Fee. Prerequisite: Senior I. Corequisites: NUR 442, 443. Pre- or corequisite: NUR 462.

NUR 494 Special Topics. (1–4)*fall, spring, summer*

Advanced study and/or supervised practice in an area of nursing. Lecture and lab to be arranged. Prerequisite: 12 hours in Nursing major or instructor approval.

NUR 495 Community Health/Home Health Practice for RNs. (4)*fall and spring*

Theoretical content related to community and home health care. Clinical practice with individual, family aggregates. 1 hour lecture, 3 hours lab. Fee. Prerequisite: NUR 392.

NUR 496 Leadership and Management Practice for RNs. (5)*fall and spring*

Capstone leadership and management experience for the RN student that utilizes patterns of knowing in nursing practice. Clinical lab. Fee. Corequisite for RNs: NUR 495. Pre- or corequisite: NUR 443.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 91.

College of Public Programs

www.asu.edu/copp

Anne L. Schneider, Ph.D., Dean

American Indian Studies Program	466
Asian Pacific American Studies Program	468
Hugh Downs School of Human Communication	469
Walter Cronkite School of Journalism and Mass Communication	473
School of Justice Studies	477
School of Public Affairs	481
Department of Recreation Management and Tourism	482
School of Social Work	485

PURPOSE

The faculty in the College of Public Programs offer a wide range of undergraduate and graduate course work, both on and off campus, to full- and part-time students. Each academic unit of the college not only assumes responsibility in preparing its own majors, but provides a variety of service courses for the rest of the university. The college is committed to providing excellence in teaching, research, and public service. Consequently, the units work closely with numerous public, quasi-public, and private agencies at the national, regional, state, and local levels.

ORGANIZATION

The College of Public Programs is composed of eight academic units, each administered by a chair or director:

- American Indian Studies Program
- Asian Pacific American Studies Program
- Department of Recreation Management and Tourism
- Hugh Downs School of Human Communication
- School of Justice Studies
- School of Public Affairs
- School of Social Work
- Walter Cronkite School of Journalism and Mass Communication

The general administration of the college is the responsibility of the dean, who is responsible to the university president through the senior vice president and provost. For more information, visit the college's Web site at www.asu.edu/copp.

ADMISSION

Freshmen and Transfers. Individuals interested in admission to an undergraduate program in the College of Public Programs should refer to "Undergraduate Admission," page 65. Those who meet the minimum university admission requirements will be admitted to the undergraduate academic unit of the college as a preprofessional in that respective academic unit.

Professional Status Admission Requirements. Entry to any undergraduate academic unit of the college with professional status requires

1. the completion of at least 56 semester hours with a minimum cumulative GPA of 2.50;
2. the university First-Year Composition requirement and the university mathematical studies requirement (see "University Graduation Requirements," page 87); and
3. the College of Public Programs writing competence, communication, and computer requirements (see "College Degree Requirements," page 464).

The academic units may also have additional requirements.

Most upper-division courses in the college are not open to preprofessional students. Preprofessionals should check the catalog information in their major fields to determine any course enrollment restrictions.

Students should refer to the section of the catalog and advising documents with reference to their preferred areas of study for specialized departmental retention requirements and/or continued enrollment in their major courses.

Transfer Credit. In most cases, course work successfully completed at a regionally accredited four-year institution of higher education is accepted into the respective academic unit.

Transferable course work successfully completed at an accredited two-year institution of higher education (community or junior college) transfers as lower-division credit up to a maximum of 64 semester hours.

Successful completion is defined for purpose of transfer as having received a grade comparable to an "A" (4.00), "B" (3.00), or "C" (2.00) at ASU. The acceptance of credits is determined by the director of Undergraduate Admissions, and the utilization of credits toward degree requirements is at the discretion of the academic unit and the college.

ADVISING

The advising mission for the College of Public Programs professional academic advising staff is to assist students in

developing meaningful educational plans to meet their academic, career, and personal goals in an ongoing process of evaluation and clarification.

The advisors strive to perform their duties in a professional, ethical, confidential, accurate, and supportive manner, respecting student diversity and needs, and always holding the individual in highest regard. The student and advisor should accomplish this process in a spirit of shared responsibility to develop academic excellence, strong decision-making skills, and self-reliance.

A student who has been admitted to the College of Public Programs is assigned an academic advisor from the academic unit of the student's major area of study. Questions about advising should be directed to the student's academic advisor or to the College of Public Programs Student Services Office, WILSN 203.

Mandatory Advising. The following categories of students are required to receive advising and to be cleared on the Mandatory Advising Computer System before they may register for classes:

1. students with admissions competency deficiencies;
2. all freshmen;
3. transfer students in their first semester at ASU;
4. readmitted students;
5. students on probation;
6. students who have been disqualified;
7. students with special admissions status; and
8. all Social Work undergraduate majors.

Course Load. A normal course load per semester is 15 to 16 semester hours. The maximum number of hours for which a student can register is 18 semester hours unless an overload petition has been filed and approved by the Department/School Standards Committee and the Academic and Student Affairs Committee of the college. Semester course loads may be further limited for students in mandatory advising.

Petitions for overload are not ordinarily approved for students who have a cumulative GPA less than 3.00 and who do not state valid reasons for the need to register for the credits. Students who register for semester hours in excess of 18 and do not have an approved overload petition on file may have courses randomly removed through an "administrative drop" action.

Specific degree requirements are explained in detail under the respective college, school, and department sections.

DEGREES

The faculty in the College of Public Programs offer undergraduate degrees in six academic units. Successful completion of a four-year program of 120 semester hours is specified by the respective academic unit. See "College of Public Programs Baccalaureate Degrees and Majors" table, page 464.

GRADUATE PROGRAMS

Master's degree programs are offered by six of the academic units of the College of Public Programs, and four of the units offer doctoral degrees. See the "College of Public Programs Graduate Degrees and Majors" table, page 465.

For more information on courses, faculty, and programs, see the *Graduate Catalog*.

ASU EXTENDED CAMPUS

The College of Extended Education was created in 1990 to extend the resources of ASU throughout Maricopa County, the state, and beyond. The College of Extended Education is a university-wide college that oversees the ASU Extended Campus and forms partnerships with other ASU colleges, including the College of Public Programs, to meet the instructional and informational needs of a diverse community.

The ASU Extended Campus goes beyond the boundaries of the university's physical campuses to provide access to quality academic credit and degree programs for working adults through flexible schedules; a vast network of off-campus sites; classes scheduled days, evenings, and weekends; and innovative delivery technologies including television, the Internet, and Independent Learning. The Extended Campus also offers a variety of professional continuing education and community outreach programs.

For more information, see "ASU Extended Campus," page 689, or access the Web site at www.asu.edu/xed.

UNIVERSITY GRADUATION REQUIREMENTS

In addition to fulfilling college and major requirements, students must meet all university graduation requirements.

First-Year Composition Requirement

Students must demonstrate reasonable proficiency in written English by achieving a grade of "C" (2.00) or higher in both ENG 101 and 102 (or ENG 107 and 108 for international students), or in ENG 105 or its equivalent. Should a student receive a grade lower than "C" (2.00) in any of the courses, it must be repeated until the specified proficiency is demonstrated. Composition courses transferred from out-of-state institutions must be evaluated and approved by the Writing Programs Office.

General Studies Requirement

All undergraduate students in the College of Public Programs are required to complete the university General Studies requirement to be eligible for graduation in any of the undergraduate curricula offered by the college.

General Studies courses are regularly reviewed. To determine whether a course meets one or more parts of the General Studies requirement, see "General Studies," page 91, and the current *Schedule of Classes*.

General Studies courses are also identified following course descriptions according to the "Key to General Studies Credit Abbreviations," page 93.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 91.

COLLEGE OF PUBLIC PROGRAMS

College of Public Programs Baccalaureate Degrees and Majors

Major	Degree	Concentration*	Administered By
American Indian Studies	B.S.	—	American Indian Studies Program
Communication	B.A., B.S.	—	Hugh Downs School of Human Communication
Journalism and Mass Communication	B.A.	Journalism, media analysis and criticism, media management, media production, or strategic media and public relations	Walter Cronkite School of Journalism and Mass Communication
Justice Studies	B.S.	—	School of Justice Studies
Recreation	B.S.	Recreation management or tourism management	Department of Recreation Management and Tourism
Social Work	B.S.W.	—	School of Social Work

* If a major offers concentrations, one must be selected unless noted as *optional*.

COLLEGE DEGREE REQUIREMENTS

In addition to the university General Studies requirement, the College of Public Programs has requirements in communication, computer science, and writing competence.

Communication Requirement

Undergraduate students in the College of Public Programs are required to take a course in communication. The course provides an overview of human communication in public and/or cultural contexts and helps students develop oral presentation skills and competence. Students majoring in American Indian Studies, Justice Studies, and Social Work choose from:

COM 100 Introduction to Human Communication <i>SB</i>	3
COM 225 Public Speaking <i>L</i>	3
COM 230 Small Group Communication <i>SB</i>	3
COM 241 Introduction to Oral Interpretation <i>L/HU</i>	3
COM 259 Communication in Business and the Professions.....	3

Majors in the Department of Recreation Management and Tourism choose from COM 225, 241, or 259; students in the Walter Cronkite School choose between COM 225 or 241.

Computer Requirement

A computer course is required for all undergraduate majors. Any computer (CS) course from the university General Studies list is acceptable. It may be included within the numeracy requirement or department or school degree program, where appropriate.

Non-English Language Requirement

The Walter Cronkite School of Journalism and Mass Communication and the School of Social Work require proficiency in a language other than English. Communication majors have the choice of demonstrating proficiency in a language other than English under the B.A. Proficiency is defined as completing the second semester intermediate level, or higher, of a language other than English.

Writing Competence Requirement

In addition to ENG 101 and 102 First-Year Composition or their equivalent, one of the following courses in advanced written expository composition is required of all undergraduate majors:

BUS 301 Fundamentals of Management Communication <i>L</i>	3
ENG 215 Strategies of Academic Writing <i>L</i>	3
ENG 216 Persuasive Writing on Public Issues <i>L</i>	3
ENG 217 Writing Reflective Essays <i>L</i>	3
ENG 218 Writing About Literature <i>L</i>	3
ENG 301 Writing for the Professions <i>L</i>	3
JMC 201 Journalism Newswriting <i>L</i>	3
JMC 202 Radio-Television Writing <i>L</i>	3

The writing competence course may be counted as fulfilling the university General Studies literacy and critical inquiry (L) requirement if it is on the university-approved list.

Pass/Fail Option

The College of Public Programs does not offer any courses for pass/fail credit. Courses completed for pass/fail credit outside the College of Public Programs may count only as elective credit in meeting degree requirements.

Limit on Physical Education Activity Hours

No more than eight hours of physical education activity courses may be counted within the minimum 120 hours required for graduation.

PREPROFESSIONAL REQUIREMENTS

Students should refer to the respective department or school section of the catalog and to department or school advising documents for more information on requirements.

Undergraduate Credit for Graduate Courses

To enable undergraduate students to enrich their academic development, the Graduate College and the individual academic units of the College of Public Programs allow qualified students to take graduate-level courses for undergraduate credit. To qualify for admission to a graduate-level course, the student must have senior standing (87 or more semester hours successfully completed) and a cumulative GPA of 3.00 or higher. In addition, permission to enroll must be given before registration and must be approved by the instructor of the course, the student's advisor, the department chair or school director, and the dean of the college in which the course is offered.

College of Public Programs Graduate Degrees and Majors

Major	Degree	Concentration*	Administered By
Communication	M.A.	—	Hugh Downs School of Human Communication
	Ph.D.	Communicative development, intercultural communication, or organizational communication	Hugh Downs School of Human Communication
Justice Studies	M.S.	—	School of Justice Studies
	Ph.D.	Optional: criminal and juvenile justice; dispute resolution; law, justice, and minority populations; law, policy, and evaluation; or women, law, and justice*	School of Justice Studies
Mass Communication	M.M.C.	—	Walter Cronkite School of Journalism and Mass Communication
Public Administration	M.P.A.	Optional: nonprofit administration*	School of Public Affairs
	Ph.D.	—	School of Public Affairs
Recreation	M.S.	—	Department of Recreation Management and Tourism
Social Work	M.S.W.	Advanced direct practice or planning, administration, and community practice	School of Social Work
	Ph.D.	—	School of Social Work

* If a major offers concentrations, one must be selected unless noted as *optional*.

ACADEMIC STANDARDS AND RETENTION

Good Standing. Students in the College of Public Programs are considered in good standing for the purpose of retention if they maintain a cumulative GPA of 2.00 or higher in all courses taken at ASU. However, to achieve professional status in the undergraduate degree programs in the college, students must have a cumulative GPA of 2.50 or higher at ASU.

Probation. Any student who does not maintain good standing is placed on academic probation. A student on academic probation is required to observe any limitations or rules the college may impose as a condition for retention.

Disqualification. A student who is on probation becomes disqualified if (1) the student has not returned to good standing or (2) the student has not met the required semester GPA.

Disqualification is exercised at the discretion of the college and becomes effective on the first day of the fall or spring semester following college action. A disqualified student is notified by the Office of the Registrar and/or the dean of the college and is not allowed to register for a fall or spring semester at the university until reinstated. A student who is disqualified may not attend as a nondegree student.

Reinstatement. Students seeking reinstatement after disqualification should contact the College of Public Programs Student Services Office regarding procedures and guidance for returning to good standing. When reinstatement includes readmission, application must be made to the Readmissions Section of the Office of the Registrar.

All academic discipline action is the function of the College of Public Programs Student Services Office, WILSN 203, under the direction of the dean of the college. Students

having academic problems should call this office for advising at 480/965-1034.

SPECIAL PROGRAMS

Barrett Honors College

The College of Public Programs cooperates with the Barrett Honors College, which affords superior undergraduates opportunities for special classes taught by selected faculty. Honors students receive special advising and priority pre-registration and complete a senior honors thesis. Participating students can major in any academic program. A full description of the requirements and the opportunities offered by the Barrett Honors College can be found in the "The Barrett Honors College," page 128.

For more information, visit the College of Public Programs Student Services Office at WILSN 203, or call 480/965-1034. For more information about the Barrett Honors College, call 480/965-2359.

College of Public Programs Council

The College of Public Programs Council is a unit of Associated Students of Arizona State University and serves as the coordinating body of student activities in the college. The council fosters communication, cooperation, and understanding among undergraduate students, graduate students, faculty, and staff. As the official representative student organization to the dean and college administration, the council appoints student members to faculty committees, cosponsors events with the college alumni association, and represents students at college and university functions.

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF PUBLIC PROGRAMS

Center for Nonprofit Leadership and Management

The mission of the Center for Nonprofit Leadership and Management is "to improve the quality of life in communities by enhancing the performance of nonprofit organizations." Varied strategies accomplish this mission and include coordination of educational offerings, selected technical assistance to nonprofits, support for research projects for faculty and students, and the convening of nonprofit leaders and managers through a variety of training opportunities. The center supports the activities of two complementary nonprofit management education programs—the Nonprofit Youth and Human Service Leadership and Management: American Humanities Certificate (undergraduate) and the Nonprofit Leadership and Management Certificate (graduate). For more information, call 480/965-0607, or access the Web site at www.asu.edu/copp/nonprofit.

NONPROFIT LEADERSHIP AND MANAGEMENT (NLM)

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

Center for Urban Inquiry. The Center for Urban Inquiry's (CUI) mission is threefold: critical social science research, community engagement, and innovative education. The research agenda prioritizes the scrutiny of economic and social privilege and disadvantage. Specific research requests from policymakers, nonprofit and government agencies, and citizen groups are also considered. This includes a rapid response community research initiative established to provide intensive feedback to community research requests that must be completed within a limited time frame, as well as long-term process and outcome evaluations of programs and policies in the private and public sectors. CUI also facilitates collaborative research efforts among faculty, research professionals, and students. Such research includes an examination of the individual and collective costs of poverty in the Southwest and the design of comprehensive research to explore the extent and nature of racial profiling among agents of social control.

CUI's direct community involvement ranges from the local to the global. This includes support of neighborhood groups advocating for homeowners and renters within the context of urban development and displacement, the creation of a hospital-based community partnership to combat youth violence, and participation in United Nations summits on sustainable development and indigenous peoples' rights. The center serves the university and community through innovative educational endeavors, including a distance-learning college program for incarcerated women, in-depth research training for graduate and undergraduate students, and courses in service learning, community action research, and international urban issues. CUI also serves as the administrative and programmatic home for the needs-based Nina Mason Pulliam Legacy Scholars Program for nontraditional students.

For more information, call 480/965-9216, access the center's Web site at www.asu.edu/copp/urban, or write

CENTER FOR URBAN INQUIRY
ARIZONA STATE UNIVERSITY
PO BOX 874603
TEMPE AZ 85287-4603

College of Public Programs

The academic units within the College of Public Programs may use the CPP prefix for course offerings that cross disciplinary boundaries.

COLLEGE OF PUBLIC PROGRAMS (CPP)

CPP 194 Special Topics. (1–4)
selected semesters

CPP 294 Special Topics. (1–4)
selected semesters

CPP 394 Special Topics. (1–4)
selected semesters

CPP 484 Internship. (1–12)
selected semesters

CPP 494 Special Topics. (1–4)
selected semesters

CPP 498 Pro-Seminar. (1–7)
selected semesters

CPP 499 Individualized Instruction. (1–3)
selected semesters

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

American Indian Studies Program

www.asu.edu/copp/americanindian
480/965-3634
AG 372

Carol Chiago Lujan, Director

Associate Professor: Lujan

Assistant Professors: Miller, Vicente Carpio

The American Indian Studies Program is an academic discipline that emphasizes the political and cultural experience of the various American Indian Nations and peoples of the United States. Course work focuses on the cultures, arts, history, and contemporary experiences of the various American Indian nations. The curriculum also concentrates on the practical application for professional career development, preparation for advanced degree programs, and preparation for service to Indian governments and reservations. It emphasizes scholarly expertise in selected fields of study and its practical application to community service.

AMERICAN INDIAN STUDIES—B.S.

Students pursuing a B.S. degree in American Indian Studies gain a broad knowledge of American Indian nations and peoples, with particular emphasis on Southwest American Indian nations. The degree program offers courses that provide students with intellectual and practical knowledge per-

AMERICAN INDIAN STUDIES PROGRAM

taining to American Indian cultures, history, law, literature, language, art, and government.

American Indian Studies Program Professional Status Requirements. Undergraduate American Indian Studies students must earn professional status before taking the upper-division courses in the major. These preprofessional students may be admitted to professional status after meeting the College of Public Programs professional status requirements listed below and by earning grades of "C" (2.00) or higher in AIS 180 and AIS 280.

Professional Status Admission Requirements. Professional status students must have completed at least 56 semester hours with a minimum cumulative GPA of 2.50; the university First-Year Composition requirement; the university mathematical studies requirement; and the College of Public Programs writing competence, communication, and computer requirements.

Students are required to take 42 semester hours, including 24 hours of required courses and 18 hours in one of two areas of emphasis: (1) legal policy, community, and nation building; or (2) arts, languages, and cultures. Contact the program office for a current list of elective courses. Students must receive a minimum grade of "C" (2.00) in required and emphasis courses. The following courses are required for all students majoring in American Indian Studies:

AIS 180 Introduction to American Indian Studies C	3
AIS 280 Indigenous Law and Society C	3
AIS 370 American Indian Languages and Cultures	3
AIS 380 Contemporary Issues of American Indian Nations	3
AIS 385 Federal Indian Policy	3
AIS 394 ST: Basic Statistical Analysis*	3
AIS 420 American Indian Studies Research Methods	3
AIS 498 Pro-Seminar	3

* Until American Indian Studies is able to offer its own course in statistical research methods, students must take JUS 302, or a comparable course, in consultation with an advisor.

MINOR IN AMERICAN INDIAN STUDIES

The minor in American Indian Studies is designed for students interested in developing an understanding of American Indian issues and analyzing issues through critical inquiry. Fifteen semester hours are required, including AIS 180, 380, and 385 and six elective semester hours from the two areas of emphasis. No pass/fail or credit/noncredit course work may be applied to the minor. A minimum of nine hours must be in resident credit at ASU Main. Students must receive a minimum grade of "C" (2.00) for all courses in the minor and meet all course eligibility requirements.

CERTIFICATE IN AMERICAN INDIAN STUDIES

The certificate program recognizes the need for training American Indian and non-Indian students for employment and leadership roles in American Indian government, in state/federal agencies, in education programs, and in urban and Indian community programs.

To this end, the American Indian Studies Certificate program seeks to address the myriad of contemporary social,

political, and economic problems and issues impacting American Indian people.

The program provides students with

1. useful knowledge pertaining to American Indian sovereignty, government, law, history, economic development, and culture;
2. practical experience in the form of an off-campus internship working in an American Indian government, a community program, an educational entity, an urban program, or a state/federal agency; and
3. educational skills so that graduates can pursue jobs with an American Indian focus.

A certificate in American Indian Studies requires the completion of 21 semester hours. A minimum of 12 hours must be upper division, and a minimum grade of "C" (2.00) or higher is required except for the AIS Internship course, which requires a passing "Y" grade.

AIS 180 Introduction to American Indian Studies C	3
AIS 280 Indigenous Law and Society C	3
AIS 380 Contemporary Issues of American Indian Nations	3
AIS 484 Internship	3
AIS 494 ST: Law, Policy, and American Indians	3
Emphasis courses*	6

* Select courses from the two areas of emphasis; contact the program office for a current list.

For more information, call the director of the American Indian Studies Program at 480/965-3634.

B.I.S. CONCENTRATION

A concentration in American Indian studies is available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 123.

AMERICAN INDIAN STUDIES (AIS)

AIS 180 Introduction to American Indian Studies. (3)

once a year

Introduction to the study of American Indian justice issues from an interdisciplinary perspective. Primary topics include sovereignty, law, and culture.

General Studies: C

AIS 194 Special Topics. (1-4)

fall and spring

AIS 280 Indigenous Law and Society. (3)

fall and spring

Examines the sovereign status of American Indians and legal relationships between the tribes and the U.S. government. Lecture, discussion.

General Studies: C

I. literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF PUBLIC PROGRAMS

AIS 294 Special Topics. (1–4)

selected semesters

AIS 370 American Indian Languages and Cultures. (3)

fall

Emphasizes understanding of Indian language families and the relationship of oral traditions to culture. Prerequisite: AIS 180.

AIS 380 Contemporary Issues of American Indian Nations. (3)

spring

Survey of legal, socioeconomic, political, and educational state of contemporary reservation and urban Indians. Prerequisite: AIS 180.

AIS 385 Federal Indian Policy. (3)

spring

Historical overview of political and legal frameworks, executive policies, and judicial decisions in the context of Indian affairs. Prerequisite: AIS 180.

AIS 394 Special Topics. (1–4)

fall and spring

Topics may include the following:

- American Indian World Views and Philosophies. (3)
- Basic Statistical Analysis. (3)

AIS 420 American Indian Studies Research Methods. (3)

fall

Survey of diverse research methods, including statistical, historical, interpretative, and narrative approaches. Prerequisite: AIS 180.

AIS 484 Internship. (1–12)

selected semesters

Fee.

AIS 494 Special Topics. (1–4)

fall and spring

Topics may include the following:

- Law, Policy, and American Indians. (3)

AIS 498 Pro-Seminar. (1–7)

selected semesters

AIS 499 Individualized Instruction. (1–3)

selected semesters

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Justice Studies

Associate Professor: Menjivar

Languages and Literatures

Associate Professor: Choi

Psychology in Education

Associate Professor: Nakagawa

Recreation Management and Tourism

Professor: Yoshioka

Social Work

Assistant Professor: Okamoto

Women's Studies

Assistant Professor: Leong

PURPOSE

Asian Pacific American Studies is an interdisciplinary undergraduate program that examines the experiences of Asian Americans and Pacific Islanders within the United States, particularly in the Southwest. The program is designed to help students of all ethnicities to

1. appreciate the diversity of Asian American and Pacific Islander cultures, experiences, and histories;
2. understand the U.S. experience in new ways; and
3. participate more effectively in an increasingly diverse society.

A certificate program offers courses that provide students with opportunities to think critically about interethnic cooperation and conflict. The program integrates teaching, research, and community service.

CERTIFICATE IN ASIAN PACIFIC AMERICAN STUDIES

Course Requirements. The certificate program requires 18 semester hours. Twelve core hours must be fulfilled by the following courses:

APA 200 Introduction to Asian Pacific American Studies <i>HU/SB, C</i>	3
APA 360 Asian Pacific American Experience <i>HU/SB, C</i>	3
APA 450 Asian Pacific American Contemporary Issues <i>SB, C</i>	3
APA 484 Internship	3
or APA 494 ST: Asian Pacific American Communities (3)	

The remaining six semester hours must be filled by courses from an approved list, including any additional courses with an APA prefix, as well as ASB 242, COM 263, and MCO 460.

Students must apply for the certificate program through the Asian Pacific American Studies Program office. For more information, call the program director at 480/965-9711.

B.I.S. CONCENTRATION

A concentration in Asian Pacific American studies is available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has

Asian Pacific American Studies Program

www.asu.edu/copp/asianamerican

480/965-9711

AG 352

Thomas K. Nakayama, Director

CORE FACULTY

Professor: Nakayama

Assistant Professors: de Jesús, Li, Rosa

Academic Associate: Kuo

AFFILIATED FACULTY

Anthropology

Professor: Eder

English

Assistant Professor: Fuse

Human Communication

Associate Professor: Martínez

academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see “Bachelor of Interdisciplinary Studies,” page 123.

ASIAN PACIFIC AMERICAN STUDIES (APA)

APA 194 Special Topics. (1–4)

fall and spring

APA 200 Introduction to Asian Pacific American Studies. (3)

fall and spring

Examines historical and contemporary issues facing Asian Americans and Pacific Islanders in the United States. Lecture, discussion.

General Studies: HU/SB, C

APA 210 Introduction to Ethnic Studies in the U.S. (3)

fall and spring

Covers diversity of experiences and relations among racial and ethnic groups in the United States. Lecture, discussion. Cross-listed as AFS 210/CCS 210. Credit is allowed for only AFS 210 or APA 210 or CCS 210.

General Studies: C

APA 294 Special Topics. (1–4)

fall and spring

Open to all students. May be repeated for credit.

APA 310 Asian Pacific American Arts and Cultures. (3)

fall and spring

Explores Asian Pacific American cultural expression in art, literature, film, theatre, dance, and music. Lecture, discussion.

General Studies: HU, C

APA 315 Asian Pacific American Literature. (3)

fall

Explores the literary history, critical reception, and major theories in Asian Pacific American poetry, fiction, and prose. Lecture, discussion.

General Studies: HU, C

APA 330 Asian Pacific American Genders and Sexualities. (3)

spring

Explores gender and sexuality issues as they relate to Asian Pacific American experiences, including interracial relationships, stereotypes, feminism, queer theory. Lecture, discussion.

General Studies: SB, C

APA 340 Asian Pacific Americans and Media. (3)

fall

Analyzes social construction of Asian Pacific American media images and resistance to those images in various historical contexts. Lecture, discussion.

General Studies: HU, C

APA 345 Asian Pacific Americans and Film. (3)

spring

Examines representations of Asian Pacific Americans in narrative, popular, experimental, and documentary film. Lecture, discussion.

APA 360 Asian Pacific American Experience. (3)

fall and spring

Historical and contemporary experiences of Asian Pacific American racial/ethnic groups in the United States. Lecture, discussion. Topics may include the following:

- Chinese American
- Filipina and Filipino American
- Japanese American
- Korean American
- Pacific Islander
- South Asian American
- Southeast Asian American

General Studies: HU/SB, C

APA 394 Special Topics. (1–4)

fall and spring

Open to all students. May be repeated for credit. Topics may include the following:

- Asian Pacific American Immigration Issues
- Asian Pacific American Legal History
- Asian Pacific American Women Issues and Identities

APA 450 Asian Pacific American Contemporary Issues. (3)

fall and spring

Focuses on issues shaping Asian Pacific American communities, including immigration, politics, education, health, family, gender, youth, interracial relations, and other contemporary topics. Lecture, discussion. Prerequisite: APA 200 or instructor approval.

General Studies: SB, C

APA 484 Internship. (1–12)

fall and spring

Fee.

APA 494 Special Topics. (1–4)

fall and spring

Open to all students. May be repeated for credit. Topics may include the following:

- Asian Pacific American Communities. (3)
- Asian Pacific American Leadership
- Voices and Visions: Asian Pacific American Women, Issues, and Identities

APA 498 Pro-Seminar. (1–7)

fall and spring

APA 499 Individualized Instruction. (1–3)

fall and spring

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see “Omnibus Courses,” page 63.

Hugh Downs School of Human Communication

com.pp.asu.edu

480/965-5095

STAUF A412

Jess K. Alberts, Director

Professors: Alberts, Arnold, Broome, Canary, Carlson, Corman, Guerrero, Jain, Martin, McPhee, Mongeau, Nakayama

Associate Professors: Buley, Corey, Davey, Davis, De la Garza, Floyd, Martinez, Mayer, Trethewey

Assistant Professors: Brouwer, Messman, Park-Fuller, Tracy

Instructional Professional: Olson

Assistant Instructional Professional: McDonald

PURPOSE

The Hugh Downs School of Human Communication exists to advance the understanding of message-related human behavior for the purpose of improving communicative interactions. Teaching, research, and service are directed to the continued development of knowledge and application of principles of communication. Employers have ranked interpersonal, analytical, teamwork, computer,

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See “General Studies,” page 91.

COLLEGE OF PUBLIC PROGRAMS

and verbal communication skills as the top five skills desired for new hires. The curriculum is designed so that majors are proficient in each of these areas upon graduation. Courses are not offered in broadcasting or journalism.

GENERAL INFORMATION

A minimum GPA of 2.50 is required for enrollment in all upper-division courses and COM 207. A minimum GPA of 2.25 is required for enrollment in COM 110, 241, 250, and 263.

Communication Major Requirements. Undergraduate preprofessional students may be admitted to professional status after meeting all of the following requirements:

- (1) College of Public Programs major status admission requirements (see "Admission," page 462); and
- (2) completion of 12 semester hours of Communication major core course requirements (COM 100, 207, 225, and 308) with a minimum grade of "C" (2.00) in each.

Students may reach professional status upon successful completion of COM 308; they do not need to apply for major status.

DEGREE REQUIREMENTS

B.A. and B.S. Degrees

Students may choose to complete either a Bachelor of Arts or Bachelor of Science degree in Communication. The B.A. degree requires a minimum of 54 semester hours, including six hours of related area courses and a capstone course (COM 404, 407, or 484). The B.S. degree requires a minimum of 54 semester hours, including a General Studies CS (statistics) course, COM 408, and a capstone course (COM 404 or 407).

Both degree options require that students take four core courses (COM 100, 207, 225, and 308) plus 18 semester hours (six courses) where introductory courses are paired with advanced courses.

Students must choose three of the following courses for a total of nine semester hours:

COM 110 Elements of Interpersonal Communication <i>SB</i>	3
or COM 310 Relational Communication (3)	
COM 241 Introduction to Oral Interpretation <i>L/HU</i>	3
COM 250 Introduction to Organizational Communication <i>SB</i>	3
COM 263 Elements of Intercultural Communication <i>SB, C, G</i>	3
COM 321 Rhetorical Theory and Research <i>L/HU, H</i>	3
or COM 323 Communication Approaches to Popular Culture <i>C</i> (3)	

Students must then match the three courses selected above with the corresponding 400-level courses—the middle digits of the course numbers match—from the following list for a total of nine hours:

COM 410 Interpersonal Communication Theory and Research <i>SB</i>	3
COM 421 Rhetoric of Social Issues <i>HU</i>	3
COM 441 Performance Studies <i>HU</i>	3
COM 450 Theory and Research in Organizational Communication <i>SB</i>	3
COM 463 Intercultural Communication Theory and Research <i>SB, G</i>	3

Another 15 semester hours (five courses) must be communication electives, only three hours (one course) of which may be 100- or 200-level. A minimum grade of "C" (2.00) is required in all communication courses except for a maximum of six semester hours of "Y" credit available to qualified students in COM 281, 382, and/or 484.

To assure the breadth and depth of their education, all Communication undergraduates must complete the requirements of the university General Studies, the College of Public Programs, and the Hugh Downs School of Human Communication. For descriptive information on university requirements, refer to "General Studies," page 91, and "University Graduation Requirements," page 87. Students in the College of Public Programs are required to take an advanced composition course (which meets the General Studies L requirement). Although many Communication courses meet the university General Studies requirements for literacy and critical inquiry (L), students must take an advanced composition course *from the list provided by the College of Public Programs*.

Students should consult the school for current information concerning College of Public Programs and Hugh Downs School of Human Communication requirements.

Communication Internships

Internships (COM 484) consist of supervised field experiences and are available to upper-level undergraduate students with major status and a minimum ASU GPA of 2.50. Students must also have completed or be concurrently enrolled in COM 410, 421, 441, 450, or 463. An application for internship must be completed in the semester before the intended term for an internship. Contact the school for specific deadline dates. Internships must receive prior approval from the internship programs coordinator *before* student registration for the course. Internships may be taken for up to six semester hours.

MINOR IN COMMUNICATION

The minor in Communication consists of 15 semester hours of courses, including COM 100 plus COM 225 or 259, and nine additional semester hours, at least six of which must be in the upper division. Nine of the total 15 semester hours must be ASU Main resident credits including six semester hours of upper-division credit. No pass/fail, "Y" credit, or credit/no-credit courses are allowed. Communication courses required for one's major may not also count for the minor. All prerequisite and GPA requirements must be met. The "C" (2.00) minimum requirement must be met for each class.

B.I.S. CONCENTRATION

A concentration in communication is available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 123.

GRADUATE PROGRAMS

In addition to offering an M.A. degree program, the Hugh Downs School of Human Communication also offers an interdisciplinary Ph.D. degree program in Communication. See the *Graduate Catalog* for the requirements and areas of concentration.

**HUGH DOWNS SCHOOL
OF HUMAN COMMUNICATION (COM)**

COM 100 Introduction to Human Communication. (3)

fall, spring, summer

Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.

General Studies: SB

COM 110 Elements of Interpersonal Communication. (3)

fall, spring, summer

Demonstration and practice of communicative techniques in establishing and maintaining interpersonal relationships. Prerequisite: 2.25 GPA.

General Studies: SB

COM 207 Introduction to Communication Inquiry. (3)

fall, spring, summer

Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication. Prerequisites: COM 100; 2.50 GPA.

COM 222 Argumentation. (3)

fall and spring

Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence. Prerequisite: ENG 101 or 105.

General Studies: L

COM 225 Public Speaking. (3)

fall, spring, summer

Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication. Prerequisite: ENG 101 or 105.

General Studies: L

COM 230 Small Group Communication. (3)

fall, spring, summer

Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.

General Studies: SB

COM 241 Introduction to Oral Interpretation. (3)

fall, spring, summer

Communication of literary materials through the mode of performance. Verbal and nonverbal behavior, interface of interpreter with literature and audience, and rhetorical and dramatic analysis of literary modes. Prerequisites: ENG 101 (or 105); 2.25 GPA.

General Studies: L/HU

COM 250 Introduction to Organizational Communication. (3)

fall, spring, summer

Introduces the study of communication in organizations, including identification of variables, roles, and patterns influencing communication in organizations. Prerequisite: 2.25 GPA.

General Studies: SB

COM 259 Communication in Business and the Professions. (3)

fall, spring, summer

Interpersonal, group, and public communication in business and professional organizations. Not open to freshmen and not available for credit toward the major.

COM 263 Elements of Intercultural Communication. (3)

fall, spring, summer

Basic concepts, principles, and skills for improving communication between persons from different minority, racial, ethnic, and cultural backgrounds. Lecture, discussion. Prerequisite: 2.25 GPA.

General Studies: SB, C, G

COM 271 Voice Improvement. (3)

selected semesters

Intensive personal and group experience to improve normal vocal usage, including articulation and pronunciation.

COM 281 Communication Activities. (1–3)

fall, spring, summer

Nongraded participation in forensics or interpretation cocurricular activities. Maximum 3 semester hours each semester. Prerequisite: instructor approval.

COM 294 Special Topics. (3)

fall, spring, summer

Topics may include the following:

- Beyond Words

COM 300 CIS: Communication in Interdisciplinary Studies. (3)

fall, spring, summer

Examines and analyzes communication in the context of other academic disciplines. May be repeated for credit. Open to B.I.S. majors only. Prerequisites: both COM 100 and 225 or only COM 259; 2.00 GPA.

COM 301 Introductory Theories and Principles of Communication: Communication in Relationships, Organizations, and Public Contexts. (3–9)

once a year

Integrated introduction to the theories and principles of communication in public, interpersonal, and organizational contexts. Lecture, discussion, online component.

COM 308 Advanced Research Methods in Communication. (3)

fall, spring, summer

Advanced communication research methods, including quantitative, qualitative, and critical approaches. Prerequisite: minimum cumulative ASU GPA of 2.50. Prerequisites with a grade of "C" (2.00) or higher: COM 207; MAT 114 (or higher-level MAT course).

General Studies: L

COM 310 Relational Communication. (3)

fall and spring

Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships. Prerequisites: COM 100; minimum cumulative ASU GPA of 2.50.

COM 312 Communication, Conflict, and Negotiation. (3)

fall and spring

Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations. Prerequisites: COM 100; minimum cumulative ASU GPA of 2.50.

COM 316 Gender and Communication. (3)

fall and spring

Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives. Prerequisite: minimum cumulative ASU GPA of 2.50.

General Studies: SB, C

COM 317 Nonverbal Communication. (3)

fall and spring

Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables. Not open to students with credit for COM 294 ST: Beyond Words. Prerequisite: minimum cumulative ASU GPA of 2.50.

COM 319 Persuasion and Social Influence. (3)

fall, spring, summer

Variables that influence and modify attitudes and behaviors of message senders and receivers, including analysis of theories, research, and current problems. Prerequisites: COM 207 (or its equivalent); minimum cumulative ASU GPA of 2.50. Prerequisite for nonmajors: POS 401 or PSY 230 or QBA 221 or SOC 390 or STP 226.

General Studies: SB

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF PUBLIC PROGRAMS

COM 320 Communication and Consumerism. (3)

once a year

Critical evaluation of messages designed for public consumption. Perceiving, evaluating, and responding to political, social, and commercial communication. Prerequisite: minimum cumulative ASU GPA of 2.50.

General Studies: SB

COM 321 Rhetorical Theory and Research. (3)

fall and spring

Historical development of rhetorical theory and research in communication, from classical antiquity to the present. Prerequisites: COM 100; minimum cumulative ASU GPA of 2.50.

General Studies: L/HU, H

COM 323 Communication Approaches to Popular Culture. (3)

fall, spring, summer

Critical analysis of popular culture within social and political contexts; emphasizes multicultural influences and representations in everyday life. Lecture, discussion. Prerequisites: COM 100; minimum cumulative ASU GPA of 2.50.

General Studies: C

COM 325 Advanced Public Speaking. (3)

fall and spring

Social and pragmatic aspects of public speaking as a communicative system; strategies of rhetorical theory and the presentation of forms of public communication. Prerequisites: COM 225; minimum cumulative ASU GPA of 2.50.

General Studies: L

COM 326 Court Room Oratory. (3)

fall in even years

Increases knowledge and appreciation of the role of communication in the development of legal and public policies.

COM 341 Social Contexts for Performance. (3)

selected semesters

Adaptation and performance of literature for the community outside the university. Research into the practical uses of performed literature. Prerequisite: minimum cumulative ASU GPA of 2.50.

COM 344 Performance of Oral Traditions. (3)

selected semesters

Cultural beliefs and values studied through ethnographic research and performance of personal narratives, folklore, myths, legends, and other oral traditions. Lecture, fieldwork, research paper. Prerequisite: minimum cumulative ASU GPA of 2.50.

General Studies: HU, C

COM 357 Communication Technology and Information Diffusion. (3)

fall

Studies effects of new communication technology on society, organizations, and individuals. Hands-on experience plus critical analysis of theory and research. Prerequisites: both COM 250 (or MGT 300 or PGS 430 or SOC 301) and CSE 180 (or its equivalent) or only instructor approval; minimum cumulative ASU GPA of 2.50.

General Studies: SB

COM 371 Language, Culture, and Communication. (3)

fall and spring

Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism. Lecture, discussion. Prerequisites: COM 263; minimum cumulative ASU GPA of 2.50.

General Studies: SB, C, G

COM 382 Classroom Apprenticeship. (1–3)

fall, spring, summer

Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses (maximum 3 semester hours each semester). Prerequisites: 2.50 GPA; written instructor approval.

COM 394 Special Topics. (1–4)

fall, spring, summer

Prerequisite: minimum cumulative ASU GPA of 2.50.

COM 400 CIP: Communication in Professions. (3)

fall, spring, summer

Specialized study of communication processes in professional and organizational settings. Open to B.I.S. majors only. May be repeated

for credit. Lecture, discussion. Prerequisites: both COM 100 and 225 or only COM 259; 2.00 GPA.

General Studies: HU, C

COM 404 Research Apprenticeship. (3)

fall and spring

Direct research experience on faculty projects. Student/faculty match based on interests. Lecture, apprenticeship. Prerequisites: COM 308 (or instructor approval); minimum cumulative ASU GPA of 2.50; application required.

COM 407 Advanced Critical Methods in Communication. (3)

fall, spring, summer

Examines critical approaches relevant to communication, including textuality, social theory, cultural studies, and ethnography. Lecture, discussion. Prerequisites: COM 308; minimum cumulative ASU GPA of 2.50.

COM 408 Quantitative Research Methods in Communication. (3)

fall and spring

Advanced designs, measurement techniques, and methods of data analysis of communication research. Prerequisites: COM 308 and a course in generic statistics (EDP 454 or POS 401 or PSY 230 or QBA 221 or SOC 390 or STP 226); minimum cumulative ASU GPA of 2.50.

COM 410 Interpersonal Communication Theory and Research. (3)

fall, spring, summer

Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers. Prerequisites: COM 110 (or 310), 308; minimum cumulative ASU GPA of 2.50.

General Studies: SB

COM 411 Communication in the Family. (3)

once a year

Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family. Prerequisites: COM 110 (or 310), 207; minimum cumulative ASU GPA of 2.50.

General Studies: SB

COM 414 Crisis Communication. (3)

selected semesters

Role of communication in crisis development and intervention.

Prerequisite: minimum cumulative ASU GPA of 2.50.

COM 421 Rhetoric of Social Issues. (3)

fall and spring

Critical rhetorical study of significant speakers and speeches on social issues of the past and present. Prerequisites: COM 308, 321 (or 323).

General Studies: HU

COM 422 Advanced Argumentation. (3)

selected semesters

Advanced study of argumentation theories and research as applied to public forum, adversary, scholarly, and legal settings. Prerequisites: COM 222; minimum cumulative ASU GPA of 2.50.

COM 426 Political Communication. (3)

fall

Theories and criticism of political communication, including campaigns, mass persuasion, propaganda, and speeches. Emphasis on rhetorical approaches. Prerequisite: minimum cumulative ASU GPA of 2.50.

General Studies: SB

COM 430 Leadership in Group Communication. (3)

selected semesters

Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations. Prerequisites: COM 230; minimum cumulative ASU GPA of 2.50.

COM 441 Performance Studies. (3)

fall, spring, summer

Theory, practice, and criticism of texts in performance. Emphasis on the interaction between performer, text, audience, and context. Prerequisites: COM 241, 308; minimum cumulative ASU GPA of 2.50.

General Studies: HU

COM 442 Identity, Performance, and Human Communication. (3)

selected semesters

Explores communication dimensions of self and others as performance. Examines topics including gender, race, sexuality, age,

and ethnicity through performance. Lecture, workshops. Prerequisites: COM 225 (or 241); minimum cumulative ASU GPA of 2.50.

COM 445 Narrative Performance. (3)

selected semesters

Theory and practice of performing narrative texts (e.g., prose fiction, oral histories, diaries, essays, letters). Includes scripting, directing, and the rhetorical analysis of storytelling. Prerequisites: COM 241; minimum cumulative ASU GPA of 2.50.

General Studies: HU

COM 446 Performance of Literature Written by Women. (3)

selected semesters

Explores, through performance and critical writing, literature written by women. Prerequisite: minimum cumulative ASU GPA of 2.50.

General Studies: HU, C

COM 450 Theory and Research in Organizational Communication. (3)

fall, spring, summer

Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies. Prerequisites: COM 250, 308; minimum cumulative ASU GPA of 2.50.

General Studies: SB

COM 453 Communication Training and Development. (3)

once a year

Examines the procedures and types of communication training and development in business, industry, and government. Prerequisites: COM 250; minimum cumulative ASU GPA of 2.50.

COM 463 Intercultural Communication Theory and Research. (3)

fall, spring, summer

Surveys and analyzes major theories and research dealing with communication between people of different cultural backgrounds, primarily in international settings. Lecture, discussion, small group work. Prerequisites: COM 263, 308; minimum cumulative ASU GPA of 2.50.

General Studies: SB, G

COM 465 Intercultural Communication Workshop. (3)

selected semesters

Experientially based study of communication between members of different cultures designed to help improve intercultural communication skills. Prerequisites: minimum cumulative ASU GPA of 2.50; instructor approval.

COM 484 Communication Internship. (1–6)

fall, spring, summer

Fee. Prerequisites: COM 225, 308; minimum cumulative ASU GPA of 2.50; application required. Pre- or corequisite: COM 410 or 421 or 441 or 450 or 463.

COM 494 Special Topics. (1–3)

fall, spring, summer

Prerequisite: minimum cumulative ASU GPA of 2.50.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

Walter Cronkite School of Journalism and Mass Communication

www.asu.edu/cronkite

480/965-5011

STAUF A231

Stephen Doig, Interim Director

Professors: Craft, Cronkite, Doig, Foote, Godfrey, Goldstein, Merrill, Sylvester, Watson

Associate Professors: Allen, Barrett, Bramlett-Solomon, Galician, Matera, Russell, Russomanno

Assistant Professors: Gavrilos, Keith, Schwalbe, Silcock

Clinical Professors: Itule, Leigh

Lecturers: Casavantes, Nichols

Senior Administrative Professional: Leigh

PURPOSE AND PHILOSOPHY

The primary purpose of the Walter Cronkite School of Journalism and Mass Communication is to prepare students to enter positions in media fields. The school strives to meet its mission through a three-pronged approach:

1. classroom instruction in a blend of conceptual courses, such as media law, media ethics, media history, and media management and skills courses, such as writing, editing, reporting, and production techniques;
2. on-campus media work opportunities, such as the *State Press*, the independent daily newspaper; KASC radio; KAET-TV; KAET-TV/Cactus State Poll; and "Newswatch," a weekly student-produced cable television news magazine program; and
3. off-campus media work opportunities, including internships in print, broadcast, public relations, visual journalism, sales and promotions, and media analysis and criticism.

In addition to preparing students to assume positions in the media and media-related enterprises, the school provides courses that lead to a better understanding of the role and responsibility of the media in society's public and private sectors.

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF PUBLIC PROGRAMS

ADMISSION

Preprofessional Admission

Students admitted to ASU also may be admitted to the Walter Cronkite School of Journalism and Mass Communication with preprofessional status. Preprofessional admission to the school does not guarantee admission to the upper-division professional program. All preprofessional students enrolling in courses in the school must complete a minimum of 12 semester hours with a minimum 2.50 GPA before they are permitted to enroll in school courses at the 200-level. All preprofessional students who intend to take courses beyond the 100-level must pass an English proficiency examination administered by the school.

Professional Program Admission

Admission to the Walter Cronkite School of Journalism and Mass Communication professional program, which enrolls students in their junior and senior years, is competitive and based on available resources. Once a student is granted admission, the upper-division professional program may require two years to complete.

A separate application procedure is required for entry to the upper-division professional program. To be eligible to apply for admission to the professional program, students must

1. be admitted to ASU as a classified student;
2. have completed at least 56 semester hours by the close of the semester in which the application is submitted;
3. have completed lower-division courses or their equivalents, as specified below;
4. have completed, with a passing score, the English proficiency examination administered by the school; and
5. have met College of Public Programs preprofessional status admissions requirements.

Preprofessional status students must complete the following courses:

JMC 201 Journalism Newswriting <i>L</i>	3
MCO 110 Introduction to Mass Communication <i>SB</i>	3
or MCO 120 Media and Society <i>SB</i> (3)	—
Total	6

To be considered for admission to the school's upper-division professional program, students must obtain an application form from the school office in STAUF A231, or online at www.asu.edu/cronkite. Precise application procedures and submission deadlines are outlined on the form. Completion of the minimum requirements for eligibility does not guarantee admission to the upper-division professional program. The admissions committee considers a variety of criteria, including major and cumulative GPA, media experience, writing ability, and commitment to the field. Students may apply twice.

FAST-TRACK ADMISSION

The Cronkite School has created a fast-track admissions program designed to reward students who have demonstrated high levels of academic achievements at the high

school level. All students accepted to the Journalism and Mass Communication major are evaluated to determine eligibility for the fast-track admissions program. To qualify, a student must have a minimum 3.80 high school GPA (Arizona Board of Regents GPA based on 16 competency courses) and a composite ACT score of 29 or higher or a composite SAT score of 1300 or higher. Students qualifying for this program are notified in writing that they have earned this status and are placed immediately on professional status, needing only to select their concentration area by their junior year.

ADVISING

A student should follow the sequence of courses outlined on school curriculum check sheets, their online degree audit, and the advice of the school's academic advisors. A student who enrolls as preprofessional or who seeks and ultimately gains professional status should meet regularly with their Walter Cronkite School of Journalism and Mass Communication academic advisor. Conscientious, careful planning and early advising are crucial to a student who desires to progress through the program in a timely fashion.

DEGREES

The school offers a program leading to one Bachelor of Arts degree in Journalism and Mass Communication. Students select one of five concentrations: journalism, media analysis and criticism, media management, media production, or strategic media and public relations.

The school offers a program leading to the graduate degree Master of Mass Communication.

TRANSFER STUDENTS

Transfer students must be admitted formally to ASU and must adhere to the admission procedures to be considered for admission to the professional program in the Walter Cronkite School of Journalism and Mass Communication.

Students completing their first two years of course work at a community college or four-year institution other than ASU should consult the school's academic advisors at least one full semester before they hope to be considered for admission to the school's professional program. Transfer student admission to ASU does not guarantee admission to the upper-division professional program.

PROGRAM REQUIREMENTS

Because the Walter Cronkite School of Journalism and Mass Communication is accredited by the Accrediting Council on Education in Journalism and Mass Communication, its students are required to take a minimum of 80 semester hours in courses outside the major of Journalism and Mass Communication, with no fewer than 65 semester hours in liberal arts and sciences. This requirement ensures that students receive a broad academic background.

At least 18 semester hours of major courses required by the school, including one writing course, must be taken at ASU. A student must receive a grade of "C" (2.00) or higher in all courses taken in the major and in the required related area.

WALTER CRONKITE SCHOOL OF JOURNALISM AND MASS COMMUNICATION

B.A. REQUIREMENTS

All students are required to demonstrate proficiency in a language other than English (a spoken language or American Sign Language). Proficiency is defined as completing the second semester intermediate level, or higher, of a language other than English with a grade of "C" (2.00) or higher.

The undergraduate major in Journalism and Mass Communication consists of a minimum of 30 semester hours in Walter Cronkite School of Journalism and Mass Communication courses.

Required core courses (12 of the 30 to 36 hours are required of all students in all five concentrations):

JMC 201 Journalism Newswriting <i>L</i>	3
MCO 110 Introduction to Mass Communication <i>SB</i>	3
or MCO 120 Media and Society <i>SB</i> (3)	
MCO 302 Media Research Methods	3
MCO 402 Mass Communication Law <i>L</i>	3
Total	12

Students complete the required core courses of the major (12 semester hours) plus the required courses of one concentration area (15 semester hours) and elective courses (from three to nine hours) from other areas in the major.

These courses are in addition to other degree requirements. See "University Graduation Requirements," page 87.

Related Area. Each student is required to complete a 12-semester-hour related area to complement the courses taken in the major concentration areas.

GENERAL STUDIES REQUIREMENTS

Students must satisfy the university General Studies requirement found in "General Studies," page 91, and the College of Public Programs course requirements found under "College Degree Requirements," page 464. Students are advised to review carefully the appropriate school curriculum check sheet to be sure courses taken move the student toward graduation with the least amount of delay and difficulty. Note that all three General Studies awareness areas are required.

General education requirements for the Walter Cronkite School of Journalism and Mass Communication follow.

Students are required to take one course in each of the following areas: communication (applied speech), computer science, economics, English composition (beyond the freshman level), English literature, history, mathematics (numeracy requirement), two natural science lab courses, philosophy, political science (either POS 110 or 310), and psychology.

MINOR IN MASS COMMUNICATION

The Cronkite School of Journalism and Mass Communication offers a minor in Mass Communication consisting of the required course MCO 120 Media and Society and 12 additional semester hours of upper-division ASU Main campus resident credit taken from a list of approved courses. The following courses are included:

JMC 200 Introduction to Electronic Media	3
JMC 270 Public Relations Techniques	3

MCO 240 Media Issues in American Pop Culture	3
MCO 418 History of Mass Communication <i>SB, H</i>	3
MCO 430 International Mass Communication <i>G</i>	3
MCO 435 Emerging Media Technologies	3
MCO 450 Visual Communication <i>HU</i>	3
MCO 456 Political Communication <i>SB</i>	3
MCO 460 Race, Gender, and Media <i>C</i>	3
MCO 473 Sex, Love, and Romance in the Mass Media <i>SB</i>	3
MCO 494 Special Topics	3

To take upper-division courses, the student must be at least a sophomore (25 semester hours). To pursue the minor in Mass Communication, the student must maintain a minimum 2.00 overall GPA, must obtain a minimum grade of "C" (2.00) in each course in the minor, and must have a major other than Journalism and Mass Communication.

B.I.S. CONCENTRATION

A concentration in mass communication is available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 123.

GRADUATE PROGRAM

Master of Mass Communication. The curriculum for the M.M.C. degree is designed to help students achieve intellectual and professional growth, to prepare students for positions in the mass media, and to provide a background to enable those currently in the media to advance their careers. Information on the Master of Mass Communication program is detailed in the *Graduate Catalog*.

JOURNALISM AND MASS COMMUNICATION (JMC)

JMC 200 Introduction to Electronic Media. (3)

fall, spring, summer

Surveys electronic media in the United States: history, regulation, organization, programming, and effects. Prerequisites: MCO 110 (or 120); successful completion of English proficiency exam; JMC major.

JMC 201 Journalism Newswriting. (3)

fall, spring, summer

Writing news for the print media. Fee. Prerequisites: ENG 101 (or 105); MCO 110 (or 120); successful completion of English proficiency exam; JMC major.

General Studies: L

JMC 202 Radio-Television Writing. (3)

fall and spring

Writing for electronic media, news, and continuity. Fee. Prerequisites: MCO 110 (or 120); successful completion of English proficiency exam; JMC major.

General Studies: L

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SO** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 91.

COLLEGE OF PUBLIC PROGRAMS

JMC 235 Electronic Media Production. (3)

fall and spring

Introduces basic concepts of audio and video production. Introduces operation of portable cameras, recorders, microphones, lights, editing, and postproduction equipment. Prerequisites: MCO 110 (or 120); successful completion of English proficiency exam; JMC major.

JMC 270 Public Relations Techniques. (3)

fall, spring, summer

Theory and practice of publicity, public relations, and related techniques and procedures. Prerequisite: MCO 110 or 120.

JMC 300 Advanced Broadcast Newswriting. (3)

fall and spring

Technique and practice in newswriting for broadcast and cable applications. Fee. Prerequisites: JMC 201; JMC professional status.

JMC 301 Reporting. (3)

fall and spring

Fundamentals of news gathering, interviewing, and in-depth reporting. Fee. Prerequisites: JMC 201; JMC professional status.

General Studies: L

JMC 313 Introduction to Editing. (3)

fall and spring

Copyediting and headline writing. Electronic editing on personal computer terminals. Fee. Prerequisites: JMC 301; JMC professional status.

JMC 315 Broadcast News Reporting. (3)

fall and spring

News and information practices of networks, stations, and industry. Practice in writing, reporting, and editing with emphasis on audio. Prerequisites: JMC 301; JMC professional status.

General Studies: L

JMC 330 Advanced Broadcast Reporting. (3)

fall and spring

News and information practices of networks, stations, and industry. Advanced practice in writing, reporting, and editing with emphasis on video. Prerequisites: JMC 300, 301; JMC professional status.

JMC 332 Electronic Media Programming. (3)

fall and spring

Programming theory and evaluation, regulation, ethics, and responsibilities and basics of audience psychographics and effects. Prerequisites: JMC 200; JMC professional status.

JMC 345 Videography. (3)

fall and spring

Develops an understanding of visual storytelling and how to craft a good, compelling story with pictures and sound. Lecture, lab. Fee. Prerequisites: JMC 235; JMC professional status.

JMC 351 Photojournalism I. (3)

fall and spring

Basic camera, lighting, and scanning skills. Discusses ethics. Emphasizes shooting pictures for newspaper assignments on deadline. Students should have a 35mm (film) camera. Fee. Prerequisite: JMC 201 or instructor approval.

JMC 401 Advanced Public Relations. (3)

fall and spring

Advanced theory and practice of publicity, public relations, and related techniques and procedures. Prerequisites for undergraduates: JMC 270; JMC professional status.

JMC 412 Editorial Interpretation. (3)

selected semesters

The press as an influence on public opinion. Role of the editorial in analyzing and interpreting current events. Prerequisites for undergraduates: JMC 301; JMC professional status.

JMC 413 Advanced Editing. (3)

fall and spring

Theory and practice of newspaper editing, layout and design, picture and story selection. Fee. Prerequisites for undergraduates: JMC 313; JMC professional status.

JMC 414 Electronic Publication Design. (3)

fall and spring

Theory, organization, and practice of layout, typography, and design in traditional and multimedia publishing. Fee. Prerequisites for undergraduates: JMC 270; JMC professional status.

JMC 415 Writing for Public Relations. (3)

fall and spring

Development of specific writing techniques for the practitioner in public relations agencies and divisions of major organizations. Fee. Prerequisites for undergraduates: JMC 270; JMC professional status.

JMC 417 Public Relations Campaigns. (3)

fall and spring

Theory, principles, and literature of public relations and how they relate to audiences, campaigns, and ethics. Prerequisite: JMC 401. Prerequisite for undergraduates: JMC professional status.

JMC 420 Reporting Public Affairs. (3)

fall and spring

Instruction and assignments in reporting the courts, schools, government, city hall, social problems, and other areas involving public issues. Prerequisites for undergraduates: JMC 301; JMC professional status.

JMC 425 Online Media. (3)

fall and spring

Focuses on the Internet from the perspective of the journalist—the best way to tell a story using words, photos, video, and audio. Lecture, lab. Fee. Prerequisites: JMC 201 (or its equivalent); JMC professional status.

JMC 433 Media Sales and Promotion. (3)

fall and spring

Basics of electronic media marketing practices, including commercial time sales techniques and radio/TV promotion fundamentals. Prerequisites for undergraduates: JMC 200; JMC professional status.

JMC 437 Documentary Production. (3)

fall and spring

Emphasizes individual production projects of the student's own conception and design utilizing studio, field, and postproduction techniques. Prerequisites for undergraduates: JMC 235; JMC professional status.

JMC 440 Magazine Writing. (3)

fall and spring

Writing and marketing magazine articles for publication. Prerequisites for undergraduates: JMC 301; JMC professional status.

JMC 445 Science Writing. (3)

once a year

Develops writing, interviewing, reporting skills, and an understanding of key concepts in science. Lecture, lab. Fee. Prerequisites: student majoring in B.A. in Journalism and Mass Communication or M.M.C. in Mass Communication; instructor approval.

JMC 451 Photojournalism II. (3)

fall and spring

Emphasizes shooting and Photoshop skills for newspaper and magazine assignments. Film and digital photography, flash and studio lighting. Fee. Prerequisite: JMC 351. Prerequisite for undergraduates: JMC professional status.

JMC 452 Photojournalism III. (3)

fall and spring

Continued practice in shooting (film and digital) and Photoshop skills for newspapers and magazines. Emphasizes single images, picture stories, editorial illustrations, and portfolio development. 2 hours lecture, 2 hours lab. Fee. Prerequisite: JMC 451. Prerequisite for undergraduates: JMC professional status.

JMC 465 Precision Journalism. (3)

fall and spring

Advanced reporting methods using internet research and data analysis tools for beat and investigative stories. Lecture, lab. Fee. Prerequisites for undergraduates: JMC 301; JMC professional status.

JMC 470 Depth Reporting. (3)

fall and spring

Introduces strategies for writing in-depth newspaper or magazine articles. Lecture, lab. Fee. Prerequisites for undergraduates: JMC 301; JMC professional status; instructor approval.

JMC 472 Media Management. (3)

fall, spring, summer

Management principles and practices, including organization, procedures, policies, personnel problems, and financial aspects of station management. Pre- or corequisites for undergraduates: JMC 332; JMC professional status.

JMC 475 Television Newscast Production. (3)*fall and spring*

Writing, reporting, and production of the television newscast. Prerequisite: instructor approval. Prerequisite for undergraduates: JMC professional status.

JMC 494 Special Topics. (1–4)*selected semesters*

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

MASS COMMUNICATION (MCO)**MCO 110 Introduction to Mass Communication. (3)***fall and spring*

Organization, function, and responsibilities of the media and adjunct services. Primary emphasis on newspapers, radio, television, and magazines. Credit is allowed for only MCO 110 or 120. Prerequisite: ENG 101 or 105 or 107.

*General Studies: SB***MCO 120 Media and Society. (3)***fall, spring, summer*

Role of newspapers, magazines, radio, television, and motion pictures in American society. Credit is allowed for only MCO 120 or 110. Designed for nonmajors.

*General Studies: SB***MCO 240 Media Issues in American Pop Culture. (3)***fall and spring*

Examines the production and consumption of popular culture as disseminated by the mass media with emphasis on the societal implications. Lecture, discussion.

MCO 302 Media Research Methods. (3)*fall and spring*

Surveys research methods used in the social sciences, with a focus on mass communication. Prerequisite: professional status.

MCO 402 Mass Communication Law. (3)*fall, spring, summer*

Legal aspects of the rights, privileges, and obligations of the press, radio, and television. Prerequisites: 87 earned hours; professional status.

*General Studies: L***MCO 418 History of Mass Communication. (3)***fall and spring*

American journalism from its English and colonial origins to the present day. Development and influence of newspapers, magazines, radio, television, and news gathering agencies.

*General Studies: SB, H***MCO 421 Media Problems. (3)***fall and spring*

Trends and problems of the mass media, emphasizing editorial decisions in the processing of information. Prerequisite: professional status.

MCO 430 International Mass Communication. (3)*fall and spring*

Comparative study of communication and media systems. Information gathering and dissemination under different political and cultural systems.

*General Studies: G***MCO 435 Emerging Media Technologies. (3)***once a year*

Surveys new telecommunication technologies in a convergent environment.

MCO 440 Applied Media Research. (3)*fall and spring*

Design, conduct, and analysis of applied media research. Students participate in the Cactus State Poll. Lab setting. Prerequisite: professional status.

MCO 450 Visual Communication. (3)*fall, spring, summer*

Theory and tradition of communication through the visual media with emphasis on the continuity of traditions common to modern visual media.

*General Studies: HU***MCO 456 Political Communication. (3)***fall and spring*

Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate, and image creation.

*General Studies: SB***MCO 460 Race, Gender, and Media. (3)***spring and summer*

Reading seminar designed to give a probing examination of the interface between AHANA Americans and the mass media in the United States. Lecture, discussion. Cross-listed as AFR 460. Credit is allowed for only AFR 460 or MCO 460.

*General Studies: C***MCO 470 Issues Management and Media Strategy. (3)***selected semesters*

Strategic aspects of media planning and management in public relations, public affairs, crisis communication lobbying, media ethics, and government relations. Seminar. Prerequisite: professional status.

MCO 473 Sex, Love, and Romance in the Mass Media. (3)*fall and spring*

The role of the mass media in constructing and/or reinforcing unrealistic mythic and stereotypic images of sex, love, and romance. Lecture, discussion. Prerequisites for nonmajors: 24 hours; 2.00 GPA. Prerequisites for majors: 40 hours; 2.50 GPA.

*General Studies: SB***MCO 494 Special Topics. (3)***selected semesters*

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

School of Justice Studieswww.asu.edu/copp/justice

480/965-7682

WILSN 331

Doris Marie Provine, Director**Regents' Professor:** Altheide**Professors:** Cavender, Haynes, Hepburn, Johnson, Jurik, Lauderdale, Provine, Romero, Schneider, Walker, Zatz**Associate Professors:** Bortner, Lujan, Menjivar, Riding In**Assistant Professors:** Adelman, Hanson, Kupchik, Lopez, Milun, Monahan

MISSION

Students pursuing the B.S. degree in Justice Studies find an interdisciplinary classroom experience emphasizing ideas from the social sciences, philosophy, and legal studies.

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF PUBLIC PROGRAMS

The degree is designed for students interested in studying issues of justice and those desiring justice-related careers, including law. Students develop an understanding of the meaning of justice and injustice, both descriptive and normative, and analyze often controversial issues through critical inquiry and social science investigation. The faculty focus on theories of justice and injustice in three principal areas:

1. crime and criminology;
2. law and society; and
3. social and economic justice.

Courses are designed to provide students with a comprehensive understanding of the substantive issues within each of these three areas and of the interrelationship and continuity among them. Students accordingly may learn about conflict and its negotiation; crime and violence; adolescents and delinquency; punishment and alternatives to punishment; and differential institutional and socioeconomic treatment of populations based on gender and sexuality, race and ethnicity, and social class.

The heart of any university program is its faculty. The School of Justice Studies boasts a faculty with strong scholarly credentials. Faculty members include national, international, and local award recipients in research, teaching, and public service. Faculty members are committed to challenging students to develop their own understandings of justice, to analyze critically, and to propose possible solutions to a wide variety of contemporary issues concerning crime and criminology, law and society, and social and economic justice.

While completing the Justice Studies curriculum, students encounter opportunities to develop transferable skills, including critical thinking, oral and written discourse, computer literacy, and problem solving. Faculty encourage students to practice justice through various experiential approaches, including volunteer work, service learning, and internships. Students actively engage in their education via discussion, cooperative learning, field trips, and case-based classroom formats.

ADMISSION

Upon admission to the university, Justice Studies students are classified as preprofessional. Justice Studies students must earn professional status before taking 400-level JUS resident credit courses.

Justice Studies students may achieve professional status by (1) meeting the College of Public Programs preprofessional status admission requirements (see "Admission," page 462); and (2) completing all of the following classes with a 2.50 minimum average GPA and a minimum grade of "C" (2.00) in each:

- Choose between the course combinations below..... 6 or 3
- ENG 101 First-Year Composition (3)
 - ENG 102 First-Year Composition (3)
 - or*—————
 - ENG 105 Advanced First-Year Composition (3)
 - or*—————
 - ENG 107 English for Foreign Students (3)
 - ENG 108 English for Foreign Students (3)

JUS 105 Introduction to Justice Studies	3
or JUS 305 Principles of Justice Studies (3)	
JUS 301 Research in Justice Studies	3
JUS 302 Basic Statistical Analysis in Justice Studies CS.....	3
JUS 303 Justice Theory	3
College writing competence requirement	3

ADVISING

Justice Studies students admitted as preprofessional are advised by one of the school's academic advisors. All students are encouraged to seek advising to formulate an appropriate educational plan.

Upon admission to the university, every Justice Studies undergraduate receives the *Undergraduate Advisement Guide* and an evaluation of transfer work, if any. For more information, call the school at 480/965-7682.

DEGREES

Justice Studies—B.S.

The curriculum for the B.S. degree in Justice Studies provides interdisciplinary social science courses relevant to law and justice for students working in the justice field, students anticipating justice-related careers (including the legal profession), and interested non-Justice Studies students.

MINOR IN JUSTICE STUDIES

The minor in Justice Studies is designed for students interested in developing an understanding of meanings of justice and injustice and analyzing often controversial issues through critical inquiry and social science investigation.

Eighteen hours of graded classroom JUS course work is required, including JUS 105 or 305 and JUS 303. No pass/fail or credit/noncredit course work may be applied to the minor. A minimum of nine semester hours must be resident credit at ASU Main, and a minimum of 12 hours must be upper-division credit. Students must receive a minimum grade of "C" (2.00) for all courses in the minor and meet all course eligibility requirements, including prerequisites. Consult the minor verification form available in the school office.

B.I.S. CONCENTRATION

A concentration in justice studies is available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 123.

DEGREE REQUIREMENTS

The faculty in the School of Justice Studies award a B.S. degree upon the successful completion of a curriculum consisting of a minimum of 120 semester hours, including the university General Studies requirement, College of Public Programs requirements, justice studies courses, a supplementary focus and electives. Additionally, the student must

1. earn professional status;

2. earn a minimum of 45 semester hours of upper-division credits;
3. complete the school's minimum residency requirement of 24 semester hours (see the *Undergraduate Advisement Guide*);
4. earn a grade of "C" (2.00) or higher in all justice studies courses taken at ASU that apply to the justice studies component of the curriculum (i.e., nonelectives); and
5. meet the university's residency and scholarship requirements.

GENERAL STUDIES REQUIREMENTS

To assure the breadth and depth of their education, all Justice Studies undergraduates must complete the university General Studies requirement and additional fundamental requirements prescribed by the College of Public Programs and the School of Justice Studies. For descriptive information on these requirements, see "General Studies," page 91. Note that all three General Studies awareness areas are required. Consult "General Studies Requirements" in the *Schedule of Classes* for an approved list of courses. The school implements the ASU continuous enrollment policy for First-Year Composition and the university mathematics (MA) requirement.

MAJOR REQUIREMENTS

The required justice studies component consists of 54 semester hours, of which 18 must be taken in a supplementary focus approved by the school. The following courses are required for all degree candidates. Equivalent courses may be substituted when appropriate.

JUS 105 Introduction to Justice Studies	3
or JUS 305 Principles of Justice Studies (3)	
JUS 301 Research in Justice Studies	3
JUS 302 Basic Statistical Analysis in Justice Studies CS	3
JUS 303 Justice Theory.....	3
Total.....	12

Through advising, a group of justice studies courses may be recommended to ensure a comprehensive exposure appropriate to the student's interests. The faculty encourage students interested in criminal justice issues and career areas to take JUS 100 The Justice System.

Electives. The faculty encourage students to utilize the unique opportunities afforded by the university to pursue personal and educational interests, whether in the form of a broad sampling of other disciplines or the deeper probing of a single field. Specifically, the faculty suggest that students take a minimum of one course in American government, behavioral psychology, and sociology.

Transfer of Community College Credits. Credits transferred from accredited community colleges are accepted as lower-division credits up to a maximum of 64 semester hours. The acceptance of credits is determined by the director of Undergraduate Admissions, and the utilization of credits toward degree requirements is determined by the faculty of the School of Justice Studies.

GRADUATE PROGRAMS

The faculty in the School of Justice Studies offer the following: an M.S. degree in Justice Studies, a concurrent M.S. in Justice Studies/M.A. in Anthropology, and an Interdisciplinary Ph.D. program in Justice Studies. For more information, see the *Graduate Catalog*, or access the Web site at www.asu.edu/copp/justice.

JUSTICE STUDIES (JUS)

JUS Note 1. For Justice Studies students to take a nonrequired 300-level JUS course, they must have at least a "C" in each of the required JUS courses—JUS 105 (or 305), 301, 302, and 303—and a minimum average GPA of 2.50 for these four classes. For non-Justice Studies students to take a 300-level JUS course, they must have a minimum of 56 earned semester hours (junior standing) and a minimum cumulative GPA of 2.00. Non-Justice Studies students may take JUS 301, 302, and 303 with school approval.

JUS Note 2. For non-Justice Studies students to take a 400-level JUS course, they must have a minimum of 56 earned semester hours (junior standing) and a minimum cumulative GPA of 2.50. Justice Studies students must earn professional status before taking 400-level JUS resident credit courses. Justice Studies courses at the 300 and 400 level are unavailable to non-Justice Studies students during preregistration.

JUS 100 The Justice System. (3)

fall, spring, summer

Overview of the justice system. Roles of law enforcement personnel, the courts, and correctional agencies. Philosophical and theoretical views in historical perspective.

General Studies: SB

JUS 105 Introduction to Justice Studies. (3)

fall, spring, summer

Introductory overview to the study of justice from a social science perspective. Primary topics include justice theories and justice research. Credit is allowed for only JUS 105 or 305. Appropriate for freshmen and sophomores. Lecture, discussion.

JUS 200 Topics in Concepts and Issues of Justice. (3)

once a year

Uses critical thinking skills to analyze and comprehend controversial social issues (e.g., abortion, affirmative action, capital punishment, the flat tax, and immigration). May be repeated for credit when topics vary. Lecture, discussion.

General Studies: SB

JUS 294 Special Topics. (1–3)

fall, spring, summer

Topics chosen from various fields of justice studies.

JUS 301 Research in Justice Studies. (3)

fall, spring, summer

Focuses on developing and evaluating research designs, data collection, and the relationship between validity and reliability. Stresses methods for conducting research. Prerequisite: Justice Studies student.

JUS 302 Basic Statistical Analysis in Justice Studies. (3)

fall, spring, summer

Introduces the fundamentals and application of descriptive and inferential statistics, with emphasis on the justice area. Prerequisite: intermediate algebra or higher.

General Studies: CS

JUS 303 Justice Theory. (3)

fall, spring, summer

Examines classic and contemporary philosophies and theories of justice, including legal, social, and criminal justice. See JUS Note 1.

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF PUBLIC PROGRAMS

JUS 305 Principles of Justice Studies. (3)

fall, spring, summer

Introductory overview to the study of justice from a social science perspective. Primary topics include justice theories and justice research. Credit is allowed for only JUS 305 or 105. Appropriate for juniors and seniors. Lecture, discussion. See JUS Note 1.

JUS 306 Police and Society. (3)

once a year

Focuses on community policing; critical inquiry of administrative decision making; perspectives on police-citizen violence; street practices; urban policing. Lecture, discussion. See JUS Note 1.

JUS 308 Courts and Society. (3)

once a year

History and development of courts. Relationship between dispute resolution mechanisms and cultural/social structure/processes in which they are embedded. Lecture, discussion, cooperative learning, case analysis. See JUS Note 1.

JUS 310 Corrections and Justice. (3)

once a year

Examines the United States prison condition; types of offenders; issues, including drugs, gangs, drunk driving, racial discrimination, and "intermediate" punishments. Lecture, discussion. See JUS Note 1.

JUS 311 Crime, Prevention, and Control. (3)

once a year

Examines prevention and control of crime by a review of contemporary theories, justice agency procedures, and social policies. Lecture, discussion. See JUS Note 1.

JUS 320 Community and Social Justice. (3)

once a year

Discusses and analyzes definitions of community; impact of environment on behavior; promises of community organization for local empowerment. Lecture, discussion. See JUS Note 1.
General Studies: SB, C

JUS 321 Wealth Distribution and Poverty. (3)

once a year

Examines wealth and income distribution in the United States and analyzes ideological and political forces producing an increasingly unequal society. Lecture, discussion. See JUS Note 1.
General Studies: SB, C

JUS 329 Domestic Violence. (3)

once a year

Legal, historical, theoretical, and treatment aspects of domestic violence, including child abuse, woman battering, incest, and marital rape. Lecture, discussion. See JUS Note 1.

General Studies: SB

JUS 335 Organized Crime. (3)

once a year

Nature of organized crime and its illegal activities, theories of containment, and efforts by justice agencies to counter its dominance in society. Lecture, discussion. See JUS Note 1.

JUS 345 White Collar Crime. (3)

once a year

Basic white collar concepts and categories; causes and effects; mechanisms and contexts of operation; social and criminological responses. Lecture, discussion. See JUS Note 1.

JUS 350 Immigration and Justice. (3)

fall, spring, summer

Examines immigration policy, history of immigration, refugee issues, labor force participation, gender, family, children, social networks, and transnationalism. Lecture, discussion. See JUS Note 1.

General Studies: SB, C

JUS 360 Law and Social Control. (3)

once a year

Resolution of social issues through the application of law as an agent of social control. Nature, sanctions, and limits of law. Categories of law and schools of jurisprudence. Lecture, discussion. See JUS Note 1.

General Studies: SB

JUS 365 Substantive Criminal Law. (3)

once a year

Crimes against persons, property, and society; legislative analysis; primary appellate judicial opinions; substantive criminal law issues; trial court determinations. Lecture, discussion. See JUS Note 1.

JUS 368 Procedural Criminal Law. (3)

once a year

Due process with respect to individual liberty; privacy and government power; emphasizes broad ideas of political and social theory. Lecture, discussion. See JUS Note 1.

JUS 375 Crime and the Mass Media. (3)

once a year

Surveys the impact of mass media and popular culture on crime, police actions, and social policy. Lecture, discussion. See JUS Note 1.
General Studies: SB

JUS 385 Justice and Everyday Life. (3)

once a year

Justice and injustice in everyday life and how small things can become legal issues. Role of language and interaction in social order. Lecture, group work. See JUS Note 1. Prerequisites: JUS 105 (or 305), 301, 302, 303.

General Studies: SB

JUS 394 Special Topics. (1-3)

once a year

Topics chosen from various fields of justice studies. Lecture, discussion. See JUS Note 1.

JUS 404 Imperatives of Proof. (3)

once a year

Issues of evidence, rules of proof, establishing fact and identity in the justice system. Lecture, case analysis, cooperative learning, discussion. See JUS Note 2.

General Studies: L

JUS 405 Economic Justice. (3)

fall and spring

Addresses economic issues and justice implications, including the interplay among economic conditions, race-ethnicity, class, and gender worldwide. Lecture, discussion. See JUS Note 2.

General Studies: SB, G

JUS 410 Punishment: Logic and Approach. (3)

once a year

Analyzes forms of punishment, how and why they have changed. Areas include philosophy, history, and social structure of punishment. Lecture, discussion. See JUS Note 2.

JUS 415 Gender and International Development. (3)

once a year

Examines the ways in which international development is gendered as well as women's rights as human rights in both national and international arenas. Lecture, seminar. See JUS Note 2.

General Studies: L, G

JUS 420 Women, Work, and Justice. (3)

once a year

Examines gender inequality in the workplace, including the nature of women's work, theoretical issues, and models for promoting gender justice at work. Lecture, discussion. See JUS Note 2.

General Studies: SB, C

JUS 422 Women, Law, and Social Control. (3)

once a year

Examines social, economic, and legal factors that are relevant to mechanisms of social control of women, including formal legal control and informal control through violence. See JUS Note 2.

JUS 425 Race, Gender, and Crime. (3)

once a year

Critically examines major theories, research findings, policies, and controversies concerning race, ethnicity, gender, and crime. Lecture, discussion, cooperative learning. See JUS Note 2.

General Studies: L/SB, C

JUS 430 Social Protest, Conflict, and Change. (3)

fall, spring, summer

Analyzes historical and contemporary protest movements advocating equality based on race, gender, and sexual orientation. Lecture, discussion. See JUS Note 2.

General Studies: L/SB, C

JUS 440 Administration and Justice. (3)*once a year*

Diversity issues; procedural justice and service delivery; relationships between state and economic forces, including processes of regulation; state administrative apparatuses. Lecture, case analysis, cooperative learning, discussion. See JUS Note 2.

*General Studies: L***JUS 444 Environment and Justice. (3)***fall*

Explores issues of environment and justice. Topics include justice and environmental racism, future generations, nonhuman life, global/non-Western societies. Lecture, discussion. See JUS Note 2.

*General Studies: L, C***JUS 450 Alternatives to Incarceration. (3)***once a year*

Investigates various alternatives to incarceration; advantages/disadvantages; major issues, including net widening, cost effectiveness, risk assessment, community crime prevention. Lecture, research. See JUS Note 2.

*General Studies: L***JUS 460 Feminism and Justice. (3)***once a year*

Explores feminist thought and critiques traditional political theories. Examines issues of racism, sexuality, and the law. Lecture, discussion. See JUS Note 2.

JUS 463 Discretionary Justice. (3)*once a year*

Use/abuse, key issues/manifestations of discretion in legal system and other societal institutions. Theoretical/empirical linkages between discretion and discrimination, based on race, ethnicity, and gender. Lecture, discussion. See JUS Note 2.

*General Studies: SB***JUS 465 Death Penalty in the United States. (3)***fall, spring, summer*

Focuses on capital punishment in the United States; explores negotiation of law, politics, morality, public policy, and culture. Lecture, discussion, case study. See JUS Note 2.

*General Studies: L***JUS 469 Political Deviance and the Law. (3)***once a year*

Examines the controversies created by political and deviant behavior, including a critical view of law as an agent of social control. Lecture, discussion. See JUS Note 2.

*General Studies: L/SB, C***JUS 470 Alternative Dispute Resolution. (3)***once a year*

Critical examination of the tenets of alternative dispute resolution movement; exposure to the programs of ADR, including community and court based. Lecture, cooperative learning, field research. See JUS Note 2.

*General Studies: L/SB, C***JUS 474 Legislation of Morality. (3)***once a year*

Addresses historical and contemporary issues related to social justice movements, law, and morality in a pluralistic society. Issues include AIDS, burial rights, homosexuality, poverty, prostitution, and racial discrimination. See JUS Note 2.

*General Studies: L/SB, C***JUS 477 Youth and Justice. (3)***once a year*

Critical examination of youth-related justice issues, including economic justice, violence against youth, delinquency, and the juvenile justice system. Lecture, group work, film. See JUS Note 2.

*General Studies: L/SB***JUS 479 Law and Disputing. (3)***fall and spring*

Critical analysis of the controversies created by disputes, law, and other forms of social control. Lecture, discussion. See JUS Note 2.

*General Studies: L/SB***JUS 484 Internship. (3-6)***fall, spring, summer*

Assignments in a justice-related placement designed to further the integration of theory and practice. Internships are arranged through

consultation of students with placements. Students must consult with the school for appropriate application and registration procedures. May be repeated for credit for a total of 12 semester hours, of which a maximum of 6 are applied to the major. Fee. See JUS Note 2. Prerequisites: major status; Justice Studies student.

JUS 494 Special Topics. (1-3)*once a year*

Topics chosen from various fields of justice studies. Lecture, discussion. See JUS Note 2.

JUS 498 Pro-Seminar. (1-3)*fall, spring, summer*

Small group study and research for advanced students. May be repeated for credit for a total of 9 hours, of which a maximum of 3 are applied to the major. See JUS Note 2. Prerequisites: major status; minimum cumulative GPA of 2.75; minimum GPA in JUS courses of 3.00; instructor approval.

JUS 499 Individualized Instruction. (1-3)*fall, spring, summer*

Original study or investigation in the advanced student's field of interest under the supervision of a faculty member. May be repeated for credit for a total of 6 hours, all applicable to the major. Readings, conferences, tutorials. Prerequisites: major status; minimum cumulative GPA of 2.75; minimum GPA in JUS courses of 3.00; instructor approval.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

School of Public Affairs

spa.asu.edu

480/965-3926

WILSN 208

Jeffrey Chapman, Director

Professors: Alozie, Cayer, Chapman, Coor, Crow, J. Denhardt, R. Denhardt, Hall, Lan, Perry

Associate Professors: Campbell, DeGraw

Assistant Professors: Catlaw, Corley, McCabe, Peck, Voorhees

Faculty Associates: Aerni, Hiryak, Tatro, Vanacour

Certificate

The School of Public Affairs offers a 15-semester-hour Public Administration and Public Management Certificate program. The certificate prepares students for citizenship, leadership, and careers in governmental agencies and non-profit associations. To meet certificate requirements, students take four core courses (PAF 300, 340, 420, and 460) and one elective course. The list of approved electives may

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF PUBLIC PROGRAMS

be obtained by visiting the School of Public Affairs Student Services Office in WILSN 211, or by calling 480/965-1037.

PAF 300 Public Management and Administration.....	3
PAF 340 Public Management and Policy	3
PAF 420 Public Leadership.....	3
PAF 460 Public Service Ethics	3
Elective.....	3
Total	15

B.I.S. Concentration

A concentration in public administration is available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 123.

Graduate Degrees

The school also offers a 42-semester-hour professional Master of Public Administration degree and the Doctor of Philosophy degree. The M.P.A. degree is accredited by the National Association of Schools of Public Affairs and Administration. Consult the *Graduate Catalog* for information about the programs.

PUBLIC AFFAIRS (PAF)

PAF 300 Public Management and Administration. (3)

fall and spring
Examines the context and role of the public manager and the development of the field of public administration.

PAF 340 Public Management and Policy. (3)

fall and spring
Develops conceptual, critical, and practical understanding of policy, the policy process, and policy analysis.

PAF 401 Statistics. (3)

fall and spring
Surveys statistical concepts and techniques with application to public administration. Does not count toward program of study. Satisfies statistics prerequisite requirement for PAF 501 and 502.

PAF 420 Public Leadership. (3)

fall and spring
Examines key concepts, models, and strategies for leading public and nonprofit organizations, emphasizing self-knowledge, skills, and abilities for effective leadership.

PAF 460 Public Service Ethics. (3)

fall and spring
Role, values, and issues of public management in democratic governance, citizen participation, power structures, and professional codes of conduct.

PAF 498 Pro-Seminar. (3)

selected semesters
Small group and study for advanced students in the field of public administration. May be repeated for credit for a total of 6 hours. Prerequisites: minimum 2.00 GPA; school approval.

PAF 499 Individualized Instruction. (1-3)

fall, spring, summer
Original study or investigation in public administration and public management under the supervision of a faculty member. May be

repeated for credit for a total of 6 hours. Prerequisites: minimum 3.00 GPA; school approval.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

Department of Recreation Management and Tourism

www.asu.edu/copp/recreation

480/965-7291

MOEUR 134

Randy J. Virden, Chair

Professors: Allison, Yoshioka

Associate Professors: Ashcraft, Sonmez, Teye, Timothy, Virden

Assistant Professors: Barry, Brown, Guo, Leclerc, Pritchard, White

Assistant Instructional Professional: Bossen

RECREATION—B.S.

The B.S. degree program in the Department of Recreation Management and Tourism centers upon the systematic study of leisure-related phenomena, including human behavior and development, resource use, environmental and social issues, and public policy. It is a professional program that features full exposure of students to a multifaceted concept of leisure and the quality preparation of these students for professional-level entry into leisure service occupations.

This multidisciplinary degree program is designed to provide the student with the competencies necessary for employment in management and program delivery positions in diverse leisure agencies such as municipal recreation and park departments, county park departments, YMCAs, YWCAs, Boys and Girls Clubs of America, and other nonprofit agencies, visitor and convention bureaus, senior centers, retirement communities, resorts, clinical rehabilitation centers, hospitals, destination management companies, and other components of the tourism/commercial recreation industry. Graduates have also been employed by state offices of tourism, state parks departments, various federal recreation resource agencies, and professional sports arenas.

Concentrations

Students may select from two concentrations:
(1) recreation management and (2) tourism management.

Recreation Management. Students pursuing the recreation management concentration can further specialize in

therapeutic recreation, community and urban recreation, natural resource recreation, or nonprofit youth and human service leadership and management (American Humanics). In addition to the 34 semester hours of major core classes, these areas of study consist of from 15 to 18 semester hours of recreation-related courses and from 12 to 19 semester hours of related-areas courses.

Therapeutic Recreation. Within the recreation management concentration, students may specialize in therapeutic recreation and in doing so, may qualify to sit for the National Council for Therapeutic Recreation Certification exam. This professional development prepares students for careers in clinical and community settings, working with disabled individuals in their pursuit of quality leisure experiences. This program is the only one of its kind in a growing field in Arizona.

Tourism Management. The tourism management concentration consists of 34 semester hours of major core courses, 12 semester hours of tourism-related requirements, nine semester hours of tourism options, and nine semester hours of nonmajor related course work.

DEPARTMENTAL MAJOR REQUIREMENTS

Students may declare Recreation as their major but cannot register for upper-division core classes without *professional status*. To be officially admitted with professional status to the B.S. degree program in Recreation, students must

1. meet the College of Public Programs preprofessional status admission requirements (see "Admission," page 462);
2. complete REC 120 and 210 with a grade of "C" (2.00) or higher; and
3. complete either COM 225, 241, or 259.

Transfer students who have completed 56 semester hours or more at another institution must remove any of the above course or scholastic deficiencies before being admitted *with professional status* to the B.S. degree in Recreation.

To graduate, students must complete the university General Studies requirement and the College of Public Programs course requirements in addition to major requirements.

PROGRAM REQUIREMENTS

The 64- to 68-semester-hour B.S. degree in Recreation includes 37 semester hours of major core courses.

Recreation Major Core Courses

REC 120 Leisure and the Quality of Life <i>SB</i>	3
REC 210 Leisure Delivery Systems.....	3
REC 330 Programming of Recreation Services <i>L</i>	3
REC 364 Foundations of Therapeutic Recreation	3
REC 440 Recreation Planning and Facility Development	3
REC 462 Management of Recreation and Tourism Services.....	3
REC 463 Senior Internship	12
REC 482 Assessment and Evaluation of Recreation Services.....	3
REC 494 ST: Preinternship Workshop.....	1
Total.....	34

REC 330, 440, 462, and 482 require *professional status* and must be taken in the proper sequence. REC 463 is the final capstone course taken in the department.

Two hundred hours of recreation leadership experience are required before enrollment in REC 463 Senior Internship. Students are not permitted to take additional course work during their senior internship placement period. Approval of internships for ASU Main students must be received from the Department of Recreation Management and Tourism office at ASU Main.

A student must attain a grade of "C" (2.00) or higher in all courses within the major, including the related area. Specific courses that may be used to fulfill the related requirements, the related areas, and the directed elective course work are listed on check sheets available in the department office and on the Web at www.asu.edu/copp/recreation.

MINORS

The department offers two minors: (1) Recreation Management and (2) Tourism. The minor in Recreation Management consists of REC 120 Leisure and the Quality of Life, REC 160 Leisure and Society, and 12 additional semester hours of approved course work, including 12 semester hours at the upper-division level, from ASU Main. The Tourism minor consists of REC 120 Leisure and the Quality of Life, REC 305 Introduction to Travel and Tourism, and nine additional semester hours of upper-division approved courses from ASU Main.

B.I.S. CONCENTRATIONS

Concentrations in recreation management and tourism management are available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Students in the B.I.S. degree program cannot choose recreation management and tourism management as the two concentrations.

Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 123.

CERTIFICATE PROGRAM

Nonprofit Youth and Human Service Leadership and Management: American Humanics Certificate Program. The certificate program in American Humanics is education and preparation for leadership and management positions in nonprofit youth and human service organizations. The program features professional affiliation with and certification by American Humanics, Inc., the nation's leader in education for nonprofit careers. American Humanics collaborates with several nonprofit organizations, including American Red Cross, Big Brothers/Big Sisters, Boys and Girls Clubs, Boy Scouts, Camp Fire Boys and Girls,

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF PUBLIC PROGRAMS

Girl Scouts, Habitat for Humanity, Junior Achievement, the United Way, YMCA, and YWCA.

This program features an academic and experiential approach that highlights the unique issues of nonprofit organization management, with a particular emphasis in youth development agencies. The program includes active participation by nonprofit professionals who offer workshops, seminars, mentoring, and field trips. American Humanics national certification can be earned in conjunction with any baccalaureate degree.

REC 220 Introduction to Nonprofit Youth and Human Service Organizations	3
REC 300 Fund Raising	3
REC 310 Volunteerism	3
REC 320 Youth and Human Service Workshop*	4
REC 420 American Humanics Institute	2
REC 430 Managing Nonprofit Organizations	3
REC 463 Senior Internship.....	12
Minimum total	30

* REC 320 is taken four semesters, for one semester hour each term.

B.I.S. CONCENTRATION

A concentration in nonprofit/youth agency administration is available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take an active role in creating their educational plan and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 123.

GRADUATE PROGRAM

M.S. Degree in Recreation. The curriculum for the M.S. degree in Recreation is designed to help students achieve both academic and professional goals. Areas of study include natural resource recreation, recreation administration, social/psychological aspects of leisure, and tourism and commercial recreation. Each student may complete a thesis or professional option. Information on the M.S. degree in Recreation is detailed in the *Graduate Catalog*.

RECREATION MANAGEMENT AND TOURISM (REC)

REC 120 Leisure and the Quality of Life. (3)

fall, spring, summer

Conceptual foundations for understanding the role of leisure in the quality of life. Social, historical, psychological, cultural, economic, and political foundations of play, recreation, and leisure.

General Studies: SB

REC 150 Outdoor Pursuits. (3)

summer

Theories and practical applications related to outdoor recreation pursuits. Interdisciplinary approach to wilderness issues and philosophies, culminating in an outdoor experience. Field trips.

REC 160 Leisure and Society. (3)

once a year

Analyzes the human relationship to leisure. Historical survey of philosophical, psychological, and socioeconomic bases for

development of systems that provide leisure programs. Non-Recreation majors only.

General Studies: SB

REC 210 Leisure Delivery Systems. (3)

fall and spring

Introduces development, management, and organization of the public, not-for-profit, and private sectors of the leisure services profession. Organized into five modular units that study the delivery of services in the recreation and tourism professions. Lecture, team taught.

Prerequisite: Recreation major. Pre- or corequisite: REC 120.

REC 220 Introduction to Nonprofit Youth and Human Service Organizations. (3)

fall and spring

Introduces the nonprofit youth and human service sector and its role in United States society, the economy, and service delivery systems.

REC 235 Service Learning for Youth Development. (3)

fall and spring

Applies youth development theories and approaches through a community service immersion in collaboration with one or more nonprofit partners. Case studies, small group discussion. Prerequisite: instructor approval.

REC 300 Fund Raising. (3)

fall

Methods, techniques, and directed experience in fund raising for voluntary youth and human services agencies. Budget control and accountability.

REC 305 Introduction to Travel and Tourism. (3)

fall and spring

Examines the components of the travel and tourism industry at the state, national, and global levels.

General Studies: G

REC 310 Volunteerism. (3)

spring

Administration of volunteer service programs. Studies and analyzes the volunteer personnel process.

REC 315 Community Recreation Systems. (3)

fall

Explores and assesses community recreation delivery systems in the United States. Prerequisite: REC 210.

REC 320 Youth and Human Service Workshop. (1)

fall and spring

Professional seminar featuring nonprofit executives; variable topics on nonprofit and youth leadership. Forum for exchange between students and professionals. May be repeated for credit. Prerequisite: instructor approval.

REC 325 Tourism Accommodations. (3)

fall

Local, national, and international overview of the lodging and food service industries. Prerequisites: REC 305; Recreation major or minor.

REC 330 Programming of Recreation Services. (3)

fall and spring

Foundations for effective program planning in varied leisure delivery systems. Prerequisite: Recreation professional status.

General Studies: L

REC 340 Outdoor Survival. (3)

fall

Interdisciplinary approach to outdoor survival, including attitudes, psychological stress, physiological stress, preparation, hypothermia, navigation, flora, and wildlife. Field trips.

REC 345 Meeting and Convention Planning. (3)

fall

Basic aspects and skills in planning meetings and conventions. Industry and market overview of certified meeting planners. Prerequisite: REC 305.

REC 350 Tourism Marketing. (3)

fall and spring

Critical examination of marketing principles; applications to travel, tourism, and related industries in diverse settings, including local, national, and international. Prerequisite: Recreation professional status. Corequisite: REC 305.

REC 364 Foundations of Therapeutic Recreation. (3)*fall and spring*

Introduces special recreation and therapeutic recreation services for persons with disabilities. Offers both a community and clinical perspective on specialized services. Prerequisite: Recreation professional status or instructor approval.

REC 370 Natural Resource Recreation Planning and Management. (3)*fall*

Comprehensive introduction into theory, processes, and techniques for managing natural resource recreation with an emphasis on the public sector.

REC 372 Tourism Planning. (3)*fall and spring*

Applies economic and regional development concepts and theories to destination product development. Prerequisites: REC 305; Recreation major or minor.

REC 380 Wilderness and Parks in America. (3)*fall and spring*

Examines the American Conservation Movement and the relationships between the environment and recreation behavior.

*General Studies: SB, H***REC 400 Processes and Techniques in Therapeutic Recreation. (3)***fall*

In-depth analysis of theoretical and philosophical approaches to therapeutic recreation practice with emphasis on various facilitation techniques used in therapy. Prerequisite: REC 364 or instructor approval.

REC 401 Program Design and Evaluation in Therapeutic Recreation. (3)*spring*

In-depth analysis of assessment, treatment planning, program implementation, documentation, and evaluation strategies employed in therapeutic recreation practice. Prerequisites: both REC 364 and 400 or only instructor approval.

REC 415 Tourism Transportation Systems. (3)*spring*

Examines the role of various modes of transportation in domestic and international tourism development. Prerequisites: REC 305; Recreation major or minor.

REC 420 American Humanics Institute. (1–2)*fall*

National Management Institute for preparation of youth development and nonprofit professionals. Out-of-state conference includes seminars and case studies. May be repeated for credit. Prerequisite: instructor approval.

REC 430 Managing Nonprofit Organizations. (3)*spring*

Analyzes administrative structures, decision making, and program delivery within nonprofit youth and human service organizations. Prerequisites: REC 220; senior standing.

REC 440 Recreation Planning and Facility Development. (3)*fall and spring*

Provides an understanding of the major principles and procedures associated with the planning and development of park, recreation, sport, and tourism areas and facilities.

REC 458 International Tourism. (3)*fall and spring*

Global examination of international tourism and its significance as a vehicle for social and economic development.

*General Studies: G***REC 460 Clinical Issues in Therapeutic Recreation. (3)***spring*

Explores contemporary problems/issues confronting the therapeutic recreation field; includes philosophical, historical, practice, management, research, and educational issues. Lecture, off-campus lab. Prerequisites: both REC 364 and 400 or only instructor approval.

REC 462 Management of Recreation and Tourism Services. (3)*fall and spring*

Basic principles of administration and their application in successful administrative situations. Analyzes administrative function, structure, and policies. Prerequisites: REC 330; Recreation professional status.

REC 463 Senior Internship. (6 or 12)*fall, spring, summer*

Supervised guided experience in selected agencies. Fee. Prerequisites: REC 462; Recreation major; senior standing.

REC 470 Environmental Interpretation and Education. (3)*spring*

Introduces park interpretation and environmental education that includes theories, principles, and techniques. Prerequisite: REC 370.

REC 480 Natural Resource Tourism. (3)*spring*

Examines the interaction of tourism with culture, natural environment, as well as the impacts of tourism on the environment.

REC 482 Assessment and Evaluation of Recreation Services. (3)*fall and spring*

Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis. Prerequisites: REC 330, 350; Recreation professional status.

REC 494 Special Topics. (1–3)*fall and spring*

Special topics selected by department faculty. Topics may include the following:

- Preinternship Workshop. (1)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

School of Social Work

sww.asu.edu

480/965-3304

WHALL 135

Leslie Leighninger, Director

Professors: Ashford, LeCroy, Leighninger, MacEachron, Martinez-Brawley, Moroney, Segal

Associate Professors: Bruzy, Gerdes, Gustavsson, Marsiglia, Montero, Napoli, Nichols, Paz, Risley-Curtiss, Steiner, Stromwall, Waller, Yellow Bird

Assistant Professors: Holley, Holschuh, Kang, Larson, Okamoto

Academic Professionals: Gonzalez-Santin, Knutson-Woods, Rountree-Antar

Visiting Assistant Professor: Bacchus

PURPOSE

The purpose of the School of Social Work is to prepare professional social work practitioners who are committed to the enhancement of individual, family, and group problem-

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF PUBLIC PROGRAMS

solving capacities and the creation of a more nurturing, just, and humane social environment.

The mission of the School of Social Work is the training of professional social workers for beginning-level generalist practice (B.S.W.) and for advanced direct practice and planning, administrative, and community practice (M.S.W.). The focus is on populations of the Southwest and those who are most oppressed and most in need of social services.

The school is committed to the university's mission to be competitive with the best public research universities in the country. Faculty members have active research agendas under way that venture into a wide variety of topics, including work with children, issues of specific importance to Latino and indigenous peoples, poverty, human services planning, and many other areas of interest.

ORGANIZATION

The School of Social Work is organized around three program areas:

1. Bachelor of Social Work (B.S.W.);
2. Master of Social Work (M.S.W.); and
3. Doctor of Philosophy (Ph.D.) with a major in Social Work.

The M.S.W. program has two areas of concentration: (1) advanced direct practice (ADP) and (2) planning, administration, and community practice (PAC). In considering the PAC area of emphasis, students need to be aware that, because of space availability, preference is given to individuals with significant previous experience.

The B.S.W. and M.S.W. degrees are offered at ASU Main and the Tucson component; the Ph.D. degree is offered at ASU Main.

For more information regarding the master's and Ph.D. programs, see the *Graduate Catalog*.

ADMISSION

Bachelor of Social Work

Preprofessional Status. Students who have declared Social Work as their major or have transferred from other universities or community colleges are admitted to ASU and the School of Social Work with preprofessional status. Transfer students should follow the procedure outlined under "Undergraduate Admission Standards," page 66.

Applying for Professional Program Status. Students who have completed 56 semester hours or more and have taken SWU 171 Introduction to Social Work, SWU 291 Social Service Delivery Systems, SWU 295 Foundations of Social Work Practice, SWU 301 Human Behavior in the Social Environment I, and SWU 310 Social Work Practice I are eligible to apply for professional program status.

Students may obtain an application packet at the School of Social Work, Academic Services, WHALL 135, or request that one be mailed to their home address by calling 480/965-6081.

Applications are reviewed for admission for the fall and spring semesters. Students applying must have a Certificate of Admission to the university in their files by November 1 for spring admission and March 1 for fall admission. All

other application materials (i.e., application form, additional statement, and two letters of reference) must be returned to

SCHOOL OF SOCIAL WORK
ACADEMIC SERVICES
ARIZONA STATE UNIVERSITY
PO BOX 871802
TEMPE AZ 85287-1802

Materials must be received by November 1 for spring admission or March 1 for fall admission. Failure to meet these deadlines may result in the applicant having to wait for the next admissions period. Applicants are notified by mail of the committee's decision. Those applicants who have been denied admission may request a conference with the B.S.W. program coordinator to discuss the decision and to obtain guidance in the development of future plans.

Criteria for Professional Program Status. Admission to professional program status is based on the following criteria:

1. A minimum of 56 semester hours with a cumulative GPA of at least 2.50 at ASU is required.
2. A minimum cumulative GPA of 2.75 in core social work courses (SWU 171, 291, 295, 301, and 310) and a grade of "C" (2.00) or higher in all social work courses are required.
3. The applicant's educational and career goals must be compatible with the educational objectives of the school.
4. Before admission to preprofessional status, it is required that students have had human service experience for a minimum of 240 hours in social work-related settings. Personal life experience may be substituted.
5. References are required for each applicant. One reference should be from a person who knows the applicant in a professional capacity and one from a person who knows the applicant in an academic capacity. Additionally, a third reference is later requested by the school from the applicant's SWU 310 instructor. This reference is used in the field placement process.
6. Fulfilling the College of Public Programs professional program status admissions requirements outlined under "Professional Status Admission Requirements," page 462.

Admission is selective and based on available resources. Not all students who meet minimum requirements are admitted to the program.

Leave of Absence. Occasionally, for health or personal reasons, Social Work students who have achieved professional program status find it necessary to interrupt their studies. Students considering such requests meet with an academic advisor to look at alternatives and then submit a written request to the B.S.W. program coordinator. A student may request a leave of absence from the Social Work program for a period of one year. Failure to request a leave of absence results in removal from the professional program. (This leave applies only to the Social Work program and not

to the university. No leave of absence is granted from the university.) Except when recommended by the Committee on Academic and Professional Standards, the student must be in good standing in the program at the time the request is made. Students should be aware that nonattendance at the university for one or more semesters requires reapplication to the university. Failure to request a leave of absence by Social Work majors results in removal from the program.

Readmission. Undergraduate students who have previously attended ASU but have not been enrolled at this institution for one or more semesters are required to apply for readmission following university procedures as outlined under "Readmission to the University," page 77. Students who were previously admitted to the professional program may, in addition, be required to reapply for professional status.

Transfer Students. The university standards for evaluation of transfer credit are listed under "Transfer Credit," page 68. Community college students planning to transfer at the end of their first or second year should plan their community college courses to meet the requirements of the ASU curriculum selected. Students attending Arizona community colleges are permitted to follow the degree requirements specified in the ASU catalog in effect at the time they begin their community college work, providing their college attendance is continuous. See "Guidelines for Determination of Catalog Year," page 87.

Arizona students are urged to refer to the Course Applicability System for the transferability of specific courses from Arizona community colleges. Students may also access the guide through the Academic Transfer Articulation Office's Web site at www.asu.edu/provost/articulation.

Courses transferred from community colleges are accepted as lower-division credit only. Students are urged to choose their community college courses carefully, in view of the fact that there is a minimum number of hours of work taken at the university that must be upper-division credit (see "Credit Requirements," page 87).

Direct transfer of courses from other accredited institutions to the School of Social Work is subject to the existence of parallel and equal courses in the school's curriculum. Transfer credit is not given for courses in which the lowest passing grade ("D" [1.00]) or a failing grade ("E" [0.00] or "F" [0.00]) was received.

Credit for "life experience" is not given in lieu of course requirements. A minimum of 30 semester hours earned in resident credit courses at ASU is required for graduation.

ADVISING

Students are responsible for meeting the degree requirements and seeking advising regarding their program status and progress. Upon admission to the Social Work major, each student is assigned a faculty advisor who assists with career planning. The academic advisor assists students with program planning, registration, preparation of needed petitions, verification of graduation requirements, and referrals to university and/or community resources. Students must meet with an academic advisor before any registration transaction.

Degrees

SOCIAL WORK—B.S.W.

The school's undergraduate curriculum leads to a Bachelor of Social Work (B.S.W.) degree. The B.S.W. degree program is accredited by the Council of Social Work Education (CSWE). The principal objective of the undergraduate curriculum is to prepare students for beginning-level generalist practice in social work. The program is also designed to prepare students for culturally sensitive practice and to provide preparation for graduate training in social work. During the freshman and sophomore years, students concentrate on obtaining a strong background in liberal arts and sciences and are classified as preprofessional until they are officially admitted to the professional program. Entrance into the Social Work professional program is not automatic (see "Applying for Professional Program Status," page 486).

Junior and senior Social Work majors focus on social work courses in research, social policy and services, social work practice, human behavior in the social environment, and field instruction in community agencies. In addition, majors take elective courses in related areas.

The B.S.W.-level practitioner is seen as a generalist. The curriculum focuses on such roles as advocacy, case management, problem-solving, and referral functions with individuals, groups, families, organizations, and the community.

Tucson Component. The Tucson Component serves students living and working in southern Arizona pursuing the B.S.W. degree. The Tucson Component—established in 1995 as a partnership between the Arizona Department of Economic Security, the ASU School of Social Work, and the College of Extended Education—became permanent in 1999. Full- and part-time students can complete all required upper-division social work courses and electives at a centrally located site near downtown Tucson, while completing general studies and other degree requirements through area community colleges, the University of Arizona, and Northern Arizona University. For more information, call the Tucson Component at 520/884-5507, extension 10.

B.I.S. CONCENTRATION

A concentration in social welfare is available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 123.

GRADUATE PROGRAMS

The faculty in the School of Social Work offer a Master of Social Work (M.S.W.) degree and a Ph.D. degree in

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF PUBLIC PROGRAMS

Social Work. For more information, see the *Graduate Catalog*.

UNIVERSITY GRADUATION REQUIREMENTS

In addition to fulfilling college and major requirements, students must meet all university graduation requirements. For more information, see "University Graduation Requirements," page 87.

General Studies Requirement

All students enrolled in a baccalaureate degree program must satisfy a university requirement for a minimum of 35 semester hours of approved course work in General Studies. See "General Studies," page 91.

Note that all three General Studies awareness areas are required. Consult an academic advisor for an approved list of courses.

SCHOOL OF SOCIAL WORK DEGREE REQUIREMENTS

All students enrolled in a baccalaureate degree program must satisfy School of Social Work degree requirements with additional course work chosen from among those courses that satisfy the General Studies requirement. General Studies courses are listed in the "General Studies Courses" table, page 94, in the course descriptions, in the *Schedule of Classes*, and in the *Summer Sessions Bulletin*.

A well-planned program of study may enable students to complete many General Studies and School of Social Work degree requirements concurrently. Students are encouraged to consult with an academic advisor in planning a program to ensure that they comply with all necessary requirements. All students are required to demonstrate proficiency in a language other than English (a spoken language or American Sign Language). Proficiency is defined as completing the second semester, intermediate level or higher, of a language other than English. The School of Social Work faculty strongly encourages students to consider Spanish or a tribal language.

Specific courses from the following areas must be taken to fulfill the college degree requirements.

Numeracy. School of Social Work students must complete a statistical analysis course (CS).

Humanities and Fine Arts. School of Social Work students must complete PHI 101 Introduction to Philosophy, PHI 105 Introduction to Ethics, or PHI 306 Applied Ethics.

Social and Behavioral Sciences. The following courses are required:

ECN 111 Macroeconomic Principles SB	3
PGS 101 Introduction to Psychology SB.....	3
or SOC 101 Introductory Sociology SB (3)	
or SOC 301 Principles of Sociology SB (3)	
Total	6

Natural Sciences. School of Social Work students must complete a course in either human biology or anatomy and physiology.

MAJOR REQUIREMENTS

The School of Social Work awards a Bachelor of Social Work degree upon the successful completion of a curriculum consisting of a minimum of 120 semester hours. This curriculum includes all university requirements (see "University Graduation Requirements," page 87), the College of Public Programs requirements including the General Studies requirements (see "General Studies," page 91), as well as the School of Social Work degree requirements.

Course Load. A normal course load per semester is 15 to 16 semester hours. The maximum number of hours for which a student can register is 18 semester hours, unless an overload petition has been filed with and approved by the B.S.W. program coordinator and the College of Public Programs dean's office.

Overload petitions are not ordinarily granted to students who have a cumulative GPA of less than 3.00 and who do not state valid reasons for the need to register for the credits. Students who register for semester hours in excess of 18 and do not have an approved overload petition on file may have courses randomly removed through an "administrative drop" action.

Social Work Core Requirement

SWU 171 Introduction to Social Work SB, H	3
SWU 291 Social Service Delivery Systems	3
SWU 295 Foundations of Social Work Practice SB	3
SWU 301 Human Behavior in the Social Environment I L/SB	3
SWU 310 Social Work Practice I.....	3
SWU 320 Research Methods in Social Work	3
SWU 332 Social Policy and Services	3
SWU 340 Human Behavior in the Social Environment II SB	3
SWU 374 Diversity and Oppression in a Social Work Context C	3
SWU 410 Social Work Practice II	3
SWU 411 Social Work Practice III.....	3
SWU 412 Field Instruction I.....	5
SWU 413 Field Instruction Seminar.....	1
SWU 414 Field Instruction II	3
SWU 415 Integrative Field Seminar.....	3
SWU 442 Introduction to Practice with Children and Families in Child Welfare	3
or SWU 444 Issues in School Social Work (3)	
Total	48

SWU 412 and 414 each require 16 hours weekly per semester in the field. Students must file an application for field work before registering for the courses. Students must have senior standing to participate in the field.

No credit is granted toward fulfilling major core requirements in any course in the student's major unless the grade in that course is at least a "C" (2.00). If a grade of "D" (1.00) or "E" (0.00) is earned in a major core course, the student must see the faculty advisor to discuss continuance in the major. Most courses in the program are sequential; successful completion of each course in the sequence is required to enroll in the following course.

Field Instruction. Field instruction for the B.S.W. program is offered concurrently with classroom study. Students are assigned to a social service agency and work under the supervision of a School of Social Work-approved social

work professional. Field instruction permits testing theory in practice and provides a base of experience for class discussions. Qualified agencies in several Arizona communities are utilized for field instruction.

B.S.W. students work in one placement for 16 hours a week, for a total of 480 hours over two semesters. In assigning the placement, the school takes into account the student's educational needs and career goals. Generalist social workers need to be familiar with the methods of working with individuals, families, and groups, as well as in organizations and communities and with all ages and ethnic groups. The faculty are committed to establishing the capabilities necessary for high-quality, social work generalist practice.

B.S.W. field instruction agencies are located primarily in the Phoenix metropolitan area for Tempe students and throughout southern Arizona for Tucson students. Specially arranged, more distant placements may require up to a two-hour drive. Although car pools are possible, personal transportation is strongly recommended while attending school.

ELECTIVES

Each student is encouraged to consult with an academic advisor in selecting electives. Economics, education, psychology, and sociology are only a few of the academic units offering knowledge of value to the professional social work practitioner.

Undergraduate Student Enrollment in Graduate Classes. Seniors within 12 semester hours of graduation may enroll in a maximum of nine graduate semester hours in the School of Social Work, providing they have an overall GPA of 3.00 or higher at the time of enrollment and have secured the required signatures for approval. Courses may be eligible for use in a future graduate program on the same basis as work taken by a nondegree graduate student (see the *Graduate Catalog*).

ACADEMIC STANDARDS

Good Standing. To remain in good academic standing, a student must maintain a minimum overall GPA of 2.00 or higher at the end of each semester in all courses taken at ASU.

Probationary Status. Any student who does not maintain good standing status is placed on probation. Students are placed on probation automatically when the GPA is less than the minimum 2.00 at the end of any semester.

Disqualification. Any student who is on probation becomes disqualified if (1) the student has not returned to good standing or (2) the student has not met the required semester GPA. See "Academic Standards and Retention," page 465, for more details on academic standards.

Academic Dishonesty. The faculty of the School of Social Work follow the guidelines as specified in the University Student Academic Integrity Policy. A copy of the policy may be obtained from the School of Social Work Office of Academic Services.

Termination from the Social Work Professional Program. A student is terminated from the professional program under any one of the following circumstances:

1. A B.S.W. student receives an "E" (0.00) grade (failure) in field practicum.
2. A B.S.W. student does not accept or is not accepted by three or more field agencies if, in the judgment of faculty and field staff, the placements can provide appropriate field experiences without undue inconvenience to the student.
3. The student does not adhere to professional expectations and standards (see the ASU Student Code of Conduct, National Association of Social Workers Code of Ethics, and CSWE Curriculum Policy Statement).
4. At any time field instructors, faculty, or the faculty advisor identify problems that indicate that a student cannot perform the required functions of a social worker.

Continuous Evaluation. While students are subject to the university's general retention policy, they are evaluated in the school on broader criteria than mere GPA. Students are reviewed for evidence of competency in social work and are continuously evaluated as they progress in the program. Prospective Social Work candidates who do not meet the established criteria are guided toward a program that is compatible with their interests and abilities.

Reinstatement. A disqualified student who desires to be reinstated may submit an application for reinstatement. A disqualified student normally is not reinstated until at least one semester has elapsed from the date of disqualification. The burden of establishing fitness is on the disqualified student, who may be required to take aptitude tests and submit to other examinations before being readmitted.

APPEAL PROCEDURES

Appeals involving the professional standards of the discipline are decided by the School of Social Work Committee on Academic and Professional Standards only after discussing the matter with the instructor of the course, the faculty advisor, and the program coordinator.

STUDENT RESPONSIBILITIES

Students are expected to support and maintain the highest professional standards as spelled out in the *ASU Student Code of Conduct* and the *National Association of Social Workers Code of Ethics*.

Regular attendance is expected in all classes and in field education and is a critical factor in evaluation of performance.

Students' rights are protected through appeal to the Committee on Academic and Professional Standards or through consultation with the school's ombudsperson.

L literacy and critical inquiry / MA mathematics / CS computer/statistics/ quantitative applications / HU humanities and fine arts / SB social and behavioral sciences / SG natural science—general core courses / SQ natural science—quantitative / C cultural diversity in the United States / G global / H historical / See "General Studies," page 91.

COLLEGE OF PUBLIC PROGRAMS

SOCIAL WORK (GRADUATE PROGRAM) (SWG)

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

SOCIAL WORK (UNDERGRADUATE PROGRAM) (SWU)

SWU 171 Introduction to Social Work. (3)

fall and spring

Descriptive and analytical historical perspective of the profession of social work, social problems, and the social welfare system. Designed for freshmen and sophomores considering this major.

General Studies: SB, H

SWU 291 Social Service Delivery Systems. (3)

fall and spring

Knowledge and skills necessary to utilize community resources to be a competent case manager. Includes 40 hours of observational experience in local agencies. Pre- or corequisite: SWU 171.

SWU 295 Foundations of Social Work Practice. (3)

fall and spring

Provides theoretical foundation and skill base necessary for social work interventions with individuals, small groups, and larger systems. Pre- or corequisites: SWU 171, 291.

General Studies: SB

SWU 301 Human Behavior in the Social Environment I. (3)

fall and spring

Analyzes theories of personality and life span development from methodological, ecological, and systems perspectives up to adolescence. Prerequisite: PGS 101 or SOC 101. Pre- or corequisites: SWU 171, 291, 295.

General Studies: L/SB

SWU 302 Human Biology for Social Workers. (3)

fall and spring

Overview of human anatomy and physiology, and the reciprocal relationship between physical and social environments. Lecture, discussion. Pre- or corequisites: SWU 171, 291.

SWU 310 Social Work Practice I. (3)

fall and spring

Introduces social work methods, emphasizing the following skills: cross-cultural interviewing, assessment, referrals, and process and psychological recording. Prerequisite: SWU 295. Pre- or corequisite: SWU 301.

SWU 320 Research Methods in Social Work. (3)

fall and spring

Applies scientific principles to field practice, impact assessment, intervention procedures, and problem formulation in social work. Lecture, cooperative learning. Pre- or corequisite: SWU 310.

SWU 321 Statistics for Social Workers. (3)

fall and spring

Teaches social work students how to use and interpret descriptive and inferential statistics in social work practice. Lecture, small group work. Prerequisites: MAT 114, 117. Pre- or corequisite: SWU 320.

General Studies: CS

SWU 332 Social Policy and Services. (3)

fall and spring

Contemporary social, political, and economic issues. Special emphasis on poverty and inequality in the Southwest. Analysis and

development of social welfare policies and programs. Lecture, cooperative learning, small group activity. Prerequisite: ECN 111.

SWU 340 Human Behavior in the Social Environment II. (3)

fall and spring

Life span development from middle childhood to maturity. Lecture, discussion. Prerequisite: SWU 301. Pre- or corequisites: SWU 302, 310.

General Studies: SB

SWU 374 Diversity and Oppression in a Social Work Context. (3)

fall and spring

Issues of social inequality related to race, ethnicity, gender, sexual orientation, and disability. Emphasizes populations of the Southwest. Prerequisite: SWU 310.

General Studies: C

SWU 410 Social Work Practice II. (3)

fall and spring

Knowledge and skills in social work practice with individuals and families. Prerequisites: PHI 101 (or 105 or 306); SWU 310; Social Work major. Corequisites: SWU 412, 413.

SWU 411 Social Work Practice III. (3)

fall and spring

Knowledge and skills in social work practice with groups, communities, and organizations. Prerequisites: SWU 410, 412, 413; Social Work major. Corequisites: SWU 414, 415.

SWU 412 Field Instruction I. (5)

fall and spring

16 hours a week of supervised practice in an approved placement. Prerequisite: Social Work major. Corequisites: SWU 410, 413.

SWU 413 Field Instruction Seminar. (1)

fall and spring

Field-focused seminar, including practice evaluation. 1.5 hours per week. Prerequisite: Social Work major. Corequisites: SWU 410, 412.

SWU 414 Field Instruction II. (3)

fall and spring

16 hours a week of supervised practice in an approved placement. Fee. Prerequisites: SWU 413; Social Work major. Corequisites: SWU 411, 415.

SWU 415 Integrative Field Seminar. (3)

fall and spring

Field-focused seminar to help integrate practice and theory. Prerequisite: Social Work major. Corequisites: SWU 411, 414.

SWU 442 Introduction to Practice with Children and Families in Child Welfare. (3)

fall and spring

Focuses on the characteristics, strengths, and service needs of families and children in the Child Welfare System. Lecture, cooperative learning. Prerequisites: SWU 410, 412, 413; Social Work major.

SWU 444 Issues in School Social Work. (3)

fall and spring

Demonstrates how community, family, and school are interdependent using an ecological metaphor, and introduces school social work. Lecture, cooperative learning. Prerequisites: SWU 410, 412, 413; Social Work major.

SWU 493 Honors Thesis. (1–6)

selected semesters

General Studies: L

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 63.

Graduate College

www.asu.edu/graduate

Maria T. Allison, Interim Dean

Graduate Programs	491
Admission to the Graduate College	496
Graduate College Procedures	497
Graduate College Degree Requirements	499
Academic Integrity	502
Misconduct in Scholarly Research and Creative Activities	502

PURPOSE

Through the faculty, the ASU Graduate College offers programs to meet the educational needs of those who already hold baccalaureate and master's degrees. While many students prepare for careers in research, the professions, and the arts, others study for personal enrichment. Both part-time and full-time students are enrolled in 95 master's and 49 doctoral majors encompassing hundreds of concentrations and specialties. Other students explore new areas of interest or prepare for career advancements apart from formal degree programs.

The size, strength, and diversity of the graduate community reflect the university's commitment to high-quality education. As a major center for graduate education, ASU supports cultural and intellectual activity as well as research in a broad range of arts and sciences and professional disciplines; in addition, the university conducts research addressing the social, cultural, and economic growth and development of Arizona and the Southwest.

One distinctive project that magnifies the Graduate College's dedication to graduate students is the Preparing Future Faculty program, funded by the Pew Charitable Trusts and ASU. The program is designed to educate students about faculty roles and prepare doctoral students specifically for faculty positions in colleges and universities across the nation.

This past year, a large number of ASU graduate students were awarded prestigious fellowships and scholarships funded by the National Science Foundation, NASA, the Ford Foundation, Fulbright, and other public agencies and private foundations.

ASU assisted more than 2,800 outstanding graduate students through academic and tuition scholarship and other financial support programs. The total financial support amounted to \$15.5 million, exemplifying the university's commitment to enabling student success.

Funded programs, together with more than 30 research centers and institutes, provide assistantships and training for many graduate students; further, the centers coordinate con-

ferences, colloquia, and special seminars to heighten the learning experience. The Office of the Vice President for Research and Economic Affairs provides seed money to enable ASU faculty and students to work at the frontiers of knowledge. Such activities continually encourage the creative embrace of change and experimentation.

ASU provides numerous choices in student life, for personal enrichment as well as cultural interaction. Many internationally known speakers present lectures here, bringing together faculty, graduate students, and the community to engage in stimulating dialogue.

Intellectual Environment. More than 10,000 students from all 50 states and more than 100 nations are enrolled in graduate study at the university. Such size and diversity contribute to a cosmopolitan setting that is ideal for intellectual discourse and stimulation. As a balance to this large grouping of students, individual graduate programs conduct small colloquia and seminars where students and faculty discuss their work in an intimate, intellectual environment supportive of student development. The result is a spirited, lively atmosphere in which students and faculty members get to know each other through collaborative research and intellectual exchange.

GRADUATE PROGRAMS

Degree Programs

Although graduate degree programs differ in many ways, they all share two important characteristics. First, in comparison to baccalaureate programs, they demand a deeper and broader understanding of a body of knowledge in a recognized discipline or profession. Second, especially in doctoral programs, graduate students prepare to make original contributions to their fields through research and other creative activities of a high order. In contrast, then, to the broad-based baccalaureate degree, graduate degrees are specialized. ASU offers several types and levels of postbaccalaureate degrees. For admission information and procedures, access the Web site at www.asu.edu/graduate/ admissions, or refer to the *Application for Graduate Admission* booklet.

Master's and Doctoral Work. Many students pursue a master's degree to satisfy their own quest for learning. In some disciplines, such as dance or architecture, the master's degree is normally the terminal or final degree. In other fields, students enter master's programs as a step toward more advanced work, such as doctoral studies, that prepares students for a lifetime of intellectual inquiry and creativity or for the application of knowledge to professional practice.

GRADUATE COLLEGE

Research Degrees. Students at ASU may pursue research-oriented or practice-oriented degrees. Research-oriented degree programs—the Master of Arts (M.A.), Master of Science (M.S.), and Doctor of Philosophy (Ph.D.)—prepare students for careers in research and scholarship in governmental, business, and industrial organizations or in university or college teaching. Students in these programs develop abilities to evaluate existing knowledge critically and to extend it into fresh areas of inquiry and scholarship.

Professional Degrees. The professional or practice-oriented degree programs have slightly different names and distinct academic missions. The names of the degrees are commonly tied to the academic unit offering the program, for example, Master of Business Administration (M.B.A.), Master of Music (M.M.), Master of Social Work (M.S.W.), and Doctor of Education (Ed.D.). With the objective of preparing students for professional practice, such programs require rigorous preparation in the fundamental literature and scholarship of the field. Some degrees require demonstrated expertise through an internship, an exhibition (art), a performance (dance), or a recital (music). Examples of ASU fields in which academic units offer professional programs include architecture and design, business, education, engineering, health services administration, law, nursing, public administration, and social work.

Nondegree Graduate Study

Many students enter graduate studies without intending to obtain a new degree but rather to enhance personal or professional knowledge. These students may want to advance in their present career, acquire the background to make a career change, or make up academic deficiencies before entering a degree program. All graduate students, degree or nondegree, enjoy the benefits of cultural and intellectual activities at the university, such as colloquia, seminars, and conferences focusing on the latest scholarship in the field. By consulting with appropriate academic units, students can learn which courses are suitable to their needs.

Note: A maximum of nine semester hours taken at ASU as a nondegree graduate student may be applied, at the academic unit's discretion, toward a future ASU master's degree.

For admission information and procedures, access the Web site at www.asu.edu/graduate/admissions, or refer to the *Application for Graduate Admission* booklet.

Graduate Studies and the University Environment

The Graduate College spans the university in supervising graduate studies and offering all postbaccalaureate degrees except the Juris Doctor, which is administered by the College of Law. Since more than 1,600 ASU faculty members teach graduate students in more than 100 instructional units, the Graduate College works closely with the other colleges and academic units. In most cases, graduate instruction is offered by units that also provide related undergraduate programs.

Interdisciplinary Study

Although most graduate programs are offered by academic units, diverse interdisciplinary programs cross academic disciplines and come under the supervision of the

Graduate College. Many majors are in fields that are still emerging as recognized academic disciplines and, therefore, do not customarily form the academic basis for departments. Other fields of study are inherently interdisciplinary and do not fit well with conventional disciplines around which departments are formed. Curricula must reflect intrinsically broad disciplinary affinities, and faculty must be drawn from more than one academic unit.

Currently, the Graduate College oversees nine interdisciplinary programs; several others are planned. Existing programs include

1. Creative Writing (M.F.A.);
2. Curriculum and Instruction (Ph.D.), jointly administered with the College of Education;
3. Exercise Science (Ph.D.);
4. Geographic Information Science (certificate);
5. Materials Science (M.S.);
6. Science and Engineering of Materials (Ph.D.);
7. Speech and Hearing Science (Ph.D.);
8. Statistics (M.S. and certificate); and
9. Transportation Systems (certificate).

Other interdisciplinary degree and certificate programs include

1. Atmospheric Science (certificate);
2. Communication (Ph.D.), administered by the College of Public Programs;
3. Environmental Design and Planning (Ph.D.), administered by the College of Architecture and Environmental Design;
4. Gerontology (certificate jointly offered at ASU Main and ASU West);
5. History and Theory of Art (Ph.D.), jointly offered with the University of Arizona and administered by the School of Art;
6. Humanities (M.A.), administered by the College of Liberal Arts and Sciences;
7. Justice Studies (Ph.D.); and
8. Molecular and Cellular Biology (M.S., Ph.D.), administered by the College of Liberal Arts and Sciences.

Each of these programs uses resources and faculty from several disciplines. The programs promote cooperative research and instruction among faculty who share common interests but are housed in different academic units and allow students to pursue degrees that are intellectually coherent but that bring together diverse strengths of the university. See "Interdisciplinary Graduate Degrees and Majors Overseen by the Graduate College" table, page 493.

Creative Writing—M.F.A.

The interdisciplinary M.F.A. degree in Creative Writing (with options in fiction, nonfiction, playwriting, poetry, and screenwriting) is administered by the Creative Writing Committee. This studio/academic program involves the research, creative activity, and teaching interests of faculty within the Departments of English and Theatre. This program provides students with the opportunity to tailor a

Interdisciplinary Graduate Degrees and Majors Overseen by the Graduate College

Major	Degree	Concentration ¹	Administered By
Creative Writing	M.F.A.	—	Creative Writing Committee
Curriculum and Instruction	Ph.D. ²	Art education, ³ curriculum studies, early childhood education, elementary education, English education, exercise and wellness education, ⁴ language and literacy, mathematics education, physical education, science education, or special education	Interdisciplinary Committee on Curriculum and Instruction
Exercise Science	Ph.D.	Biomechanics, motor behavior/sport psychology, or physiology of exercise	Committee on Exercise Science
Materials Science	M.S.	—	Committee on the Science and Engineering of Materials
Science and Engineering of Materials	Ph.D.	High-resolution nanostructure analysis or solid-state device materials design	Committee on the Science and Engineering of Materials
Speech and Hearing Science	Ph.D.	Developmental neurolinguistic disorders, neuroauditory processes, or neurogerontologic communication disorders	Committee on Speech and Hearing Science
Statistics	M.S.	—	Committee on Statistics

¹ If a major offers concentrations, one must be selected unless noted as *optional*.

² This program is administered in collaboration with the College of Education.

³ This concentration is administered in collaboration with the Katherine K. Herberger College of Fine Arts.

⁴ Doctoral courses for this interdisciplinary program administered by ASU Main are offered at ASU East.

course of study to fit individual needs, talents, and goals. Students work under the direction of faculty who are practicing, published writers. For more information, see the *Graduate Catalog*.

Curriculum and Instruction—Ph.D.

The interdisciplinary Ph.D. degree in Curriculum and Instruction is administered by the Interdisciplinary Committee on Curriculum and Instruction and is overseen jointly by the Graduate College and the College of Education. Areas of concentration are available in art education, curriculum studies, early childhood education, elementary education, English education, exercise and wellness education, language and literacy, mathematics education, music education, physical education, science education, and special education. For more information, see the *Graduate Catalog*.

Exercise Science—Ph.D.

The interdisciplinary Ph.D. degree in Exercise Science is administered by the Committee on Exercise Science. This individualized interdisciplinary degree integrates graduate courses from a variety of academic units to provide a sound foundation for research leading to a dissertation with concentrations in biomechanics, motor behavior/sport psychology, or physiology of exercise. For more information, see the *Graduate Catalog*.

Geographic Information Science

The interdisciplinary certificate program in Geographic Information Science (GIS) is administered by an Executive Committee. The objective of this program is to enable existing ASU graduate students and GIS professionals with

advanced degrees to learn how to apply GIS concepts and technology for the purposes of spatial analysis. For more information, see the *Graduate Catalog*.

Science and Engineering of Materials—Ph.D.

The interdisciplinary Ph.D. degree in Science and Engineering of Materials is administered by the Committee on the Science and Engineering of Materials. Areas of concentration are available in high-resolution nanostructure analysis and solid-state device materials design. Emphasis is placed on the applications of chemical thermodynamics, the mechanics of solids, quantum mechanics and transport theory for investigation of the relationships between the microstructure and properties of solids, and the dependence of microstructures on processing. For more information, see the *Graduate Catalog*.

SCIENCE AND ENGINEERING OF MATERIALS (SEM)

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

Speech and Hearing Science—Ph.D.

The interdisciplinary Ph.D. degree in Speech and Hearing Science is administered by the Committee on Speech and Hearing Science. Areas of concentration are available in developmental neurolinguistic disorders, neuroauditory processes, and neurogerontologic communication disorders. The purpose of the program is to prepare scholars for careers of basic and applied research in academia or in

GRADUATE COLLEGE

health care delivery environments. The unifying theme of the program is the influence aging and changes in the neurologic condition have upon human communication and communication disorders. For more information, see the *Graduate Catalog*.

Statistics—M.S.

The interdisciplinary M.S. degree in Statistics is administered by the Committee on Statistics. The program involves faculty and resources from the School of Accountancy and Information Management and the Department of Mathematics and Statistics. Areas of emphasis include applied statistics, mathematical statistics, statistical computing, statistical modeling, and statistical sampling and survey research. For more information, see the *Graduate Catalog*.

Certificate Programs

A number of certificate programs are offered by various academic units or programs on campus (see the "ASU Graduate Certificates" table, page 121).

Transportation Systems

The interdisciplinary Certificate in Transportation Systems program is administered by the Committee on Transportation Systems. The objective of this program is to enable existing ASU graduate students and transportation professionals with advanced degrees to examine transportation-related issues from a variety of perspectives and in the context of different travel modes. For more information, see the *Graduate Catalog*.

TRANSPORTATION SYSTEMS CERTIFICATE (TRC)

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 62.

RESEARCH

ASU continues to advance as a major research institution. The Office of the Vice President for Research and Economic Affairs provides leadership in obtaining external funding and in coordinating and administering sponsored projects. Many graduate students receive financial support and gain first-hand experience as they participate with faculty members in carrying out these research projects.

Much of this work is associated with campus research centers that help to develop proposals, coordinate activities, and bring together in colloquia and conferences students and faculty with common intellectual interests. Such centers include the Center for Solid State Science, the Institute for Manufacturing Enterprise Systems, the Institute of Human Origins, the Hispanic Research Center, the Joan and David Lincoln Center for Applied Ethics, and the Prevention Intervention Research Center. For more information, see "Research Centers, Institutes, and Laboratories," page 33.

Research Facilities

ASU lends support to research in diverse ways, including extensive facilities for research and instructional programs. State-of-the-art facilities include an architecture building, a fine arts complex, the Goldwater Center for Science and Engineering, an addition to the Life Sciences Center, and

the Computing Commons. The Engineering Research Center, built as part of the Engineering Excellence Program, houses advanced facilities such as the Molecular Beam Epitaxy laboratory and a clean room for microelectronic device fabrication. Among other facilities supporting research on campus are the Institute for Studies in the Arts, in the Katherine K. Herberger College of Fine Arts; the Facility for High Resolution Electron Microscopy, in the College of Liberal Arts and Sciences; and the Southwest Archaeological Collection, in the Department of Anthropology.

Library System. The ASU library system is a major research facility (see "University Library and Collections," page 29). It contains more than 3 million volumes of books and approximately 6.6 million pieces of microforms and subscribes to more than 36,000 journals and serials. Among the nation's research libraries, it is in the top quarter in annual volume acquisition. It is especially strong in amassing current monographs and serials to support graduate programs. Some of the most important research collections include manuscripts and rare photographs on Arizona and Southwest topics and an excellent collection of social science materials on Southwestern and border studies topics, including materials on northwestern Mexico. In the humanities, the main library has an outstanding collection of literary works and literary criticism from small and major presses in American and English literature. The Child Drama Collection is also outstanding. A growing rare book and manuscript collection supports the research interests of academic units. The Arthur Young Tax Library emphasizes accounting and law. The Noble Science and Engineering Library is a designated U.S. Patent Depository and as such is one of fewer than 30 U.S. academic libraries to receive copies of all new patents. The entire collection of U.S. patents in microfilm is housed in the Noble Library.

The libraries contain extensive U.S. and Arizona government documents and selected international documents.

Branch libraries provide important specialized collections. The Music Library contains scores and sound recordings. The Architecture and Environmental Design Library houses a nationally recognized set of materials on solar energy and research collections on the work of Frank Lloyd Wright and Paolo Soleri as well as other Arizona architects.

The libraries offer excellent support to researchers interested in electronic information sources. The online library system incorporates the usual catalog to ASU library holdings as well as several other important electronic reference databases and gateways. Bibliographic information on the library holdings can be accessed from any location in the world via a modem-equipped microcomputer.

The library system belongs to the Center for Research Libraries, permitting access to the center's vast collections of materials for extended loan periods.

GRADUATE STUDENT SUPPORT SERVICES

Providing academic and professional development support to graduate students is an important part of the Graduate College mission. Services include referral, individual mentoring for disadvantaged students, financial assistance, orientation sessions, workshops, career seminars, and research conferences. Graduate College Student Programs/

Services maintains a variety of programs specifically for graduate students (degree and nondegree). For more information, access the Graduate College Web site at www.asu.edu/graduate.

Graduate College Financial Assistance Office. The Graduate College Financial Assistance Office meets the needs of graduate and professional students. Students may receive financial services at Wilson Hall without having to visit other offices on campus. Students may obtain general information about graduate financial assistance at ASU, turn in documents, or receive status information on their student loans. Students can also apply for emergency short-term loans or pick up forms to report special circumstances. Staff members are available to help students with financial assistance concerns. For more information, see "Financial Aid," page 59, or access the Web site at www.asu.edu/graduate/financial.

Advising and Career/Professional Development. Many graduate students have questions and concerns about which degree to pursue; how to combine their student roles with parenting, partnering, and worker roles; and what to do with their degrees upon graduation. The Graduate College provides the following resources.

Career/Professional Development Seminars. The Graduate College, in conjunction with Counseling and Consultation, offers seminars to groups of graduate students interested in exploring career-related subject matters. Examples of seminar topics include dual career issues, the impact of values on career decision making, and transferable skills.

Strategies for Success. The Strategies for Success series of professional development workshops is broken into three categories: teaching and instruction, career development, and enriching the graduate experience. These workshops are open to all registered graduate students.

Preparing Future Faculty. Preparing Future Faculty (PFF) is a program coordinated by the Graduate College for doctoral students who are seeking careers in the professoriate. Originally a national initiative under the Council of Graduate Schools and the Association of American Colleges and Universities, PFF encourages fresh thinking and planning in faculty preparation, identifies strategies to improve the quality of teaching and learning, and orients doctoral students to different types of higher education institutions.

Preparing Future Professionals. The Preparing Future Professionals (PFP) program, administered by the Graduate College, assists doctoral students interested in pursuing nonacademic professions. PFP parallels the well-established and successful PFF program. Through a series of activities, PFP familiarizes doctoral students with various nonacademic career tracks to develop skills to successfully pursue a wide range of career opportunities.

Diversity Programs. Diversity Programs are designed to increase the number of graduate students from groups underrepresented in certain fields of study. Students interested in these programs must first go to their respective departments for nomination.

Step-Up. The Graduate College STEP-UP (Seeking Talent, Expanding Participation, Unleashing Potential) program is

designed to assist academic units in the recruitment and retention of excellent first-year graduate students from underrepresented groups. For more information, contact specific academic units.

The Social and Academic Mentor (SAM) Program. The SAM program is designed to recruit top graduate students from domestic, international, and underrepresented populations. Academic units submit applications to the Graduate College to nominate a first-year student (mentee) and peer mentor match. The mentor, two or more years advanced in the program, promotes the mentee's social and academic integration into graduate school by using a structured format. The mentor meets weekly with the mentee and schedules regular monthly meetings with the faculty advisor to discuss the mentee's concerns, progress, accomplishments, or department-related matters.

Orientations. Before each fall semester, the Graduate College hosts an orientation/reception for new graduate students.

All new teaching assistants (TAs) are required by the university and the Arizona Board of Regents to attend the TA Orientation conducted by the Graduate College. Additional professional development forums are held during the academic year and TAs are encouraged to participate.

Workshops for Undergraduate Students Considering Graduate Education. The Graduate College holds workshops to address issues that students contemplating graduate study should consider. The purpose of graduate study, the choices among research and professional degrees, the selection of schools to apply to, and the types and sources of financial support are among the topics discussed.

Student Organizations. The Graduate Student Council is part of the Associated Students of Arizona State University (ASASU), the student government for the university. The Graduate Research Support Office represents graduate student interests within ASASU and the Office of Student Life. It assists the Graduate College in planning orientations and other student-related activities. This office, with the Graduate College, also funds small research grants to support graduate students' thesis and dissertation projects. In addition to the council, many other special interest organizations are open to graduate students.

Format Office. The thesis, dissertation, or equivalent is the culmination of an important stage of graduate studies. By researching and writing this final work, graduate students are able to demonstrate acquired skills essential to a discipline. The Graduate College publishes a *Format Manual* as a guide in preparing the master's or doctoral document. The *Format Manual* and forms pertaining to procedures for completing all graduation requirements are available in the Graduate College lobby in Wilson Hall or on the Web at www.asu.edu/graduate/format.

Publications Program. The Graduate College publishes a number of brochures, fliers, and other items pertaining to academic program offerings, procedures, student financial assistance, and related topics and events in graduate education. For more information, call 480/965-3521.

GRADUATE COLLEGE

ASU Graduate Council

The Graduate Council establishes general policies and standards for graduate programs and serves as an advisory board to the Graduate College dean. As part of its duties, the council reviews and makes recommendations regarding graduate academic program proposals. Sixteen faculty members and one student serve on the council, representing a wide variety of degree programs at ASU Main and ASU East. An Academic Senate representative is also elected to serve. Council members are appointed by the president of the university. For a listing of Graduate Council members, access the Web site at www.asu.edu/graduate/gradcouncil.

Offices of the Graduate College

The general offices of the college, including those of the dean, admissions, advising, financial assistance, and graduate academic services and programs, are located on the first floor of Wilson Hall. College offices are open Monday through Friday, from 8 A.M. to 5 P.M. The Graduate College may be called at 480/965-3521. The Web address is www.asu.edu/graduate.

ADMISSION TO THE GRADUATE COLLEGE

Eligibility

Anyone who holds a bachelor's (or equivalent) or graduate degree from a college or university of recognized standing is eligible to apply for admission to the Graduate College. Remedies for undergraduate deficiencies may be assigned if the undergraduate degree is based on credits not accepted by ASU, such as life experience or noncredit workshops and seminars.

Graduate College Requirements

Generally, an applicant must have a GPA of 3.00 (scale is 4.00 = A), or the equivalent, in the last two years of work leading to the bachelor's degree. A student who enters a graduate degree program is expected to have undergraduate educational experiences, including general education studies, that are similar to those required for the baccalaureate degree at ASU.

Requirements of the Academic Unit

Academic units, departments, or colleges, may have admission requirements in addition to those of the Graduate College. Many graduate programs require scores from a national admissions test such as the Graduate Record Examination, Graduate Management Admission Test, or the Miller Analogies Test. Some programs require a portfolio, letters of recommendation, or a statement of goals. Applicants should contact the academic unit regarding specific requirements.

Submission of an Application

For admission information and procedures, access the Web site at www.asu.edu/graduate/admissions, or refer to the *Application for Graduate Admission* booklet. Students may apply via the Web, by mail, or by fax.

Application Fee

Each application for entry to ASU graduate programs must be accompanied by a nonrefundable application fee. The fee is \$45 to apply for admission to a degree program

and \$15 to apply for nondegree studies. For admission information and procedures, access the Web site at www.asu.edu/graduate/admissions, or refer to the *Application for Graduate Admission* booklet.

International Applicants

Applicants who will attend the university while holding F-1 or J-1 visas must meet the requirements of U.S. immigration regulations in addition to the requirements of the Graduate College and the academic units to which they apply.

Applicants from outside the United States are also required to submit additional materials and should follow the procedures described in the *Application for Graduate Admission* booklet or on the Web at www.asu.edu/graduate/admissions. International applicants should read this information carefully to become familiar with all the requirements, consulting it often for instructions to follow regarding the submission of materials. The *Graduate Catalog* provides essential information about ASU and its graduate programs, but applicants can also consult the ASU listings in *Peterson's Graduate Education Directory* and in the *Directory of Graduate Programs* (published by the Educational Testing Service).

TOEFL Requirement. Among the additional materials required of international students are scores from English language examinations. All applicants whose native language is not English must submit a score from the Test of English as a Foreign Language (TOEFL). The TOEFL can be waived for students who have graduated from a college or university in a country whose native language is English or for a student who has had immigrant status (permanent residency) in the United States for at least 18 months. For a complete list of TOEFL requirements, see page 7 of the *Graduate Admissions* booklet, or access the Web site at www.asu.edu/graduate/admissions/international.html.

All international applicants who do not speak English as a primary language and who wish to apply for teaching assistantships must pass an examination that certifies their skill in speaking English—either the Test of Spoken English (TSE), which may be taken in the student's home country, or the Speaking Proficiency English Assessment Kit (SPEAK) test, which is administered at ASU. Some degree programs also require TSE or SPEAK scores of applicants whose native language is not English. For specific information about TSE requirements, contact the head of the academic unit.

As required by the U.S. government, international applicants must also verify that they have the financial resources to cover their expenses during graduate study at ASU. The Financial Guarantee form is available in the *Application for Graduate Admission* booklet. It can also be accessed through the Graduate College Web site at www.asu.edu/graduate/admissions. The I-20 or the IAP66 (documents needed to obtain a student visa) are issued only after the completed, properly verified Financial Guarantee form and support documents have arrived. International students may enroll at ASU only if they have been admitted to a degree program, a certificate program, or the postbaccalaureate teacher education program. They must meet all appropriate immigration standards and requirements.

Applications are processed when they are received. However, international applicants should submit all materials in December or January in order to begin study the following fall semester and in August or September in order to begin study the following spring semester. An application fee of \$45 (in U.S. funds) must accompany each formal degree program application.

All F-1 or J-1 visa students must have insurance coverage against illness and accident before being permitted to register. Insurance must be maintained throughout the student's enrollment in the university and may be obtained at the time of registration.

Upon arrival on campus, students must report to an advisor in the International Student Office.

Additional Information

The Graduate College does not have deadlines. Applications are processed as they are received. However, many academic units have specific and early deadlines; many units review applications only once a year, usually in January or February for fall admission. Applicants are urged to contact the academic units regarding deadlines.

Academic units, which must indicate their willingness to admit applicants, frequently set higher standards than those established by the Graduate College. Many qualified applicants are denied because of limits on the number of students admitted each year.

Notice of Admission Decisions

Only the dean of the Graduate College can make formal offers of admission. The Graduate College notifies all applicants in writing of the admission decision.

All academic credentials and supporting materials received by the university in connection with an application for admission become the property of ASU. If the applicant does not enroll in the university within one year, the admission documents may be destroyed.

The date (month/day/year) on the Graduate College dean's letter of admission is the actual date of admission. If the student is enrolled in courses on the admission date, those courses—if applicable—may be considered part of a program of study. Courses taken the semester before this date are considered nondegree hours.

Admission Classifications

Regular Admission. Applicants who fulfill all requirements for admission and are academically acceptable to both the academic unit and the Graduate College are granted regular admission.

Regular Admission with Deficiencies. A student whose grades and test scores are at an acceptable level but who does not have the undergraduate background expected by the academic unit and the university may be required to complete courses to remedy deficiencies. In such cases, the letter of admission specifies the deficiencies that must be completed before the student is awarded a graduate degree. Deficiency courses may not be applied toward the minimum hours required for the degree program.

Provisional Admission. A student who does not meet minimum academic standards but has counterbalancing evidence

to suggest the potential for success may be admitted on a provisional basis. Provisional admission provides an academic unit with more evidence on which to base its decision. Normally the academic unit reviews the student's status following completion of 12 semester hours of approved graduate study. At that time, the academic unit recommends to the Graduate College a change in status to either regular admission or withdrawal from the program. When students have completed their provisional requirements, they should check with their advisors to make sure that the change of status has been recommended. A provisional student may also be assigned deficiencies.

Nondegree Admission. A student not interested in earning a degree or not ready to apply to a particular degree program may enroll as a nondegree student. The application process is streamlined and does not require submission of transcripts or test scores. For nondegree admission information and procedures, access the Web site at www.asu.edu/graduate/admissions, or refer to the *Application for Graduate Admission* booklet. Students may apply electronically. A maximum of nine hours taken at ASU while in this category may be applied toward a master's degree if appropriate for the student's program of study.

The six-year maximum time limit applies to nondegree semester hours appearing on a master's program of study. Also, because of limited class size and resources, certain academic units may limit the enrollment of nondegree students.

Recognition of a Degree

Recognition of a degree is acknowledgment that the program leading to the degree is equivalent to a program offered by ASU or is an acceptable program for the proposed graduate major at ASU. A student who enters a graduate degree program at ASU is expected to have undergraduate educational experiences, including general education studies, that are appropriate for the program.

Definition of a Unit of Credit

The Arizona Board of Regents has defined (May 26, 1979) a unit of credit for the institutions under its jurisdiction. A minimum of 45 hours of work by each student is required for each unit of credit. An hour of work is the equivalent of 50 minutes of class time (often called a "contact hour") or 60 minutes of independent study work. For lecture-discussion courses, this requirement equates to at least 15 contact hours and a minimum of 30 hours of work outside of the classroom for each unit of credit. Even though the values of 15 and 30 may vary for different modes of instruction, the minimum total of 45 hours of work for each unit of credit is a constant. Since the unit of credit as defined by the Arizona Board of Regents is the cornerstone of academic degree programs at ASU, degrees granted by other institutions that are recognized by ASU should be based on a similar unit of credit.

GRADUATE COLLEGE PROCEDURES

Change in Graduate Degree Program

A change from one graduate degree program to another requires a new application to the Graduate College. The usual admission procedures are followed. For details on

GRADUATE COLLEGE

matters relating to the application fee, see "Application Fee," page 496.

Readmission to the Graduate College

Any graduate student who has not been in attendance at the university for one or more semesters must submit an application for readmission to the Graduate College. The application should be submitted at least one month before the beginning of the semester in which the student plans to reenter. For details on readmission and other matters relating to the application fee, refer to the *Application for Graduate Admission* booklet, or access the Web site at www.asu.edu/graduate/admissions.

Determination of Catalog Requirements

The *Graduate Catalog* is published annually. Requirements for an academic unit or college, campus, or the university as a whole may change and are often upgraded.

A student graduates under the curriculum, course requirements, and regulations for graduation in effect at the time of admission to a graduate degree program at ASU. A student may also choose to graduate under any subsequent catalog but may use only one catalog.

Some changes in policies and procedures affect all students regardless of the catalog used by the student. These policies and procedures may appear in the catalog or in other university publications.

Registration

Graduate students, like all university students, register during the intervals indicated in the *Schedule of Classes* issued by the Office of the Registrar. Details regarding registration and course drop-add procedures are also provided in the *Schedule of Classes*. Day and evening graduate classes, offered on or off campus during the two regular semesters and the summer sessions, are considered part of the regular program.

SunDial, the ASU touch-tone telephone system for registration and fee payment, and the online registration system, accessed at any registrar site, ease the enrollment process.

Audit Enrollment

Graduate students may register as auditors in one or more courses with the approval of the supervisory committee chair and the consent of the instructor involved. The student must be registered properly and pay the fees for the course. An audited course is counted in the student's maximum course load. It does not count for students who must take a minimum number of credits, e.g., teaching assistants or students receiving financial assistance. The mark of "X" is recorded for completion of an audited course, unless the instructor determines that the student's participation or attendance has been inadequate, in which case a "W" may be recorded.

Withdrawal Policies and Procedures

Students who find it necessary to withdraw from the university should complete an official withdrawal form, available from any registrar site. Until officially withdrawn, the student is registered in all courses and, at the end of the semester, receives grades appropriate for the performance in each course. A student who officially withdraws from the university during the first four weeks of a semester receives

the mark of "W" in all registered courses. A student who officially withdraws from the university later than the fourth week receives a mark of "W" or "E" (0.00), depending upon the quality of work at the time of official withdrawal. No student is permitted to withdraw during or after the last two weeks of the semester (the last week of classes and final examination week).

Failure to withdraw officially from a course results in a grade of "E" (0.00), which is used in the computation of the GPA. The *Schedule of Classes* lists the procedures for withdrawal.

An instructor may withdraw a student from a class with a mark of "W" or a grade of "E" (0.00), for disruptive classroom behavior. A student may appeal an instructor-initiated withdrawal to the standards committee of the college in which the course is offered. The decision of the committee is final.

A graduate student who does not enroll for three calendar years is considered withdrawn and must reapply for admission to a degree program.

Unrestricted Withdrawal. During the first four weeks of a semester or the first six days of a summer session, a student may withdraw from any course with a mark of "W." See the *Schedule of Classes* or the *Summer Sessions Bulletin* for the dates of the unrestricted withdrawal period.

Restricted Withdrawal. From the fifth week to the end of the 10th week of a semester and from the seventh day to the end of the third week of a summer session, a student may withdraw with a mark of "W" from a course only if the instructor certifies that the student is passing at the time of the withdrawal. See the *Schedule of Classes* or the *Summer Sessions Bulletin* for dates of the restricted withdrawal period.

Medical Withdrawal. Normally, a medical withdrawal request is made in cases where serious illness or injury prevents a student from completing course work or when other arrangements with the instructor are not possible. Consideration is usually given for complete withdrawal. An application for less than a complete withdrawal must be well documented to justify the selective nature of the medical withdrawal request. This policy applies both to cases involving physical health problems and those involving mental or emotional difficulties.

To receive permission for a medical withdrawal from courses, a student must present a Request for Documented Medical Withdrawal form and proper documentation (usually a letter from a physician) of the medical condition to the medical withdrawal designee of the college of the student's major. For complete procedural information, contact the appropriate medical withdrawal designee.

Course Load

The course load is determined by the supervisory committee but is not to exceed 15 semester hours of credit during each of the two semesters. Refer to the latest *Summer Sessions Bulletin* for course load limits for five-week and eight-week sessions. An audited course is counted in the student's maximum load.

Enrollment Verification Guidelines for Graduate Students

	Full Time	Half Time	Less Than Half Time
Regular semester			
Graduate	9 or more hours	5–8 hours	4 or fewer hours
Graduate assistant*	6 or more hours	—	—
Five-week summer session			
Graduate	3 or more hours	2 hours	1 hour
Graduate assistant*	2 or more hours	1 hour	—
Eight-week summer session			
Graduate	5 or more hours	3–4 hours	2 or fewer hours

* For enrollment verification purposes, “graduate assistant” is a generic term that includes teaching assistants, research assistants, teaching associates, and research associates.

All teaching and research assistants and associates must enroll for a minimum of six semester hours during each semester (fall and spring) of their appointment. The six hours cannot include audit enrollment. Enrollment in continuing registration (595, 695, or 795) does not fulfill the six-hour requirement. A half-time (50 percent) teaching and research assistant or associate working 20 clock hours per week may not register for more than 12 semester hours of course work each semester; a third-time (33 percent) assistant or associate for more than 13 semester hours; and a quarter-time (25 percent) assistant or associate for more than 15 semester hours.

All graduate students doing research, working on theses or dissertations, taking comprehensive or final examinations, or using university facilities or faculty time must be registered for a minimum of one semester hour of credit (not audit) that appears on the program of study or is an appropriate graduate-level course, such as 595, 695, or 795 Continuing Registration.

Doctoral students fulfilling residence requirements for the Doctor of Philosophy and Doctor of Musical Arts degrees must be enrolled full time (nine semester hours minimum or six semester hours for research assistants or teaching assistants) during the specified period.

Enrollment Verification Guidelines. The registrar is responsible for verifying enrollment according to the general guidelines. See the “Enrollment Verification Guidelines for Graduate Students” table, on this page.

GRADUATE COLLEGE DEGREE REQUIREMENTS

Graduate Advising

The Graduate College’s Referral Office offers general information about policies, procedures, requirements, and support services. Students with regular admission status should contact their academic unit for degree program advising and program of study planning.

Grading

The “Grades” table, on this page, defines grades and gives their values.

Ordinarily the instructor of a course has full discretion in selecting which grades to use and report from the available grading options.

A grade of “P” (pass) in a 400-level course may not appear on a program of study. (The grade is not used at the

Grades

Grade	Definition	Value
A+	—	4.33 ¹
A	Excellent	4.00
A-	—	3.67
B+	—	3.33
B	Good	3.00
B-	—	2.67
C+	—	2.33
C	Passing	2.00
D	No graduate credit	1.00
E	Failure	0.00
I	Incomplete	—
NR	No report	—
W	Withdrawal	—
X	Audit	—
Y	Satisfactory	—
Z	Course in progress ²	—

¹ Although the scale includes a grade of A+ with a value of 4.33, the cumulative GPA is capped at 4.00.

² This grade is usually given pending completion of courses.

graduate level.) Grades on transfer work or ASU law credit are not included in computing GPAs.

Grades of “D” (1.00) and “E” (0.00) cannot be used to meet the requirements for a graduate degree, although they are used to compute the GPAs. A student receiving a grade of “D” (1.00) or “E” (0.00) must repeat the course in a regularly scheduled (not an independent study) class if it is to be included in the program of study. However, both the “D” (1.00) or “E” (0.00) and the new grade are used to compute GPAs.

Graduate course work (500-, 600-, and 700-level courses) reported as an “I” (incomplete) must be completed within one calendar year. At the time the “I” grade is given, the student must complete a “Request for Grade of Incomplete” form. The form first serves as a record of the “I” grade and the work required to complete it. When the student has completed the work, the form then serves as a change-of-grade authorization.

If the work specified on the form is not completed within one calendar year, the “I” grade (500-, 600-, and 700-level courses) becomes part of the student’s permanent transcript, and the student is not allowed to complete the course work

GRADUATE COLLEGE

as specified on the "Incomplete" form. The student may, however, repeat the course after the "I" has become permanent, by reregistering, paying fees, and fulfilling all course requirements. The grade for the repeated course appears on the transcript but does not replace the permanent "I."

A grade of "W" is given whenever a student officially withdraws.

Repeating ASU Courses. Graduate students (degree or nondegree) may retake any courses at any level at ASU, but all grades remain on the student transcript as well as in GPA calculations.

University Policy for Student Appeal Procedures on Grades

Informal. The following steps, beginning with step A, must be followed by any student seeking to appeal a grade. Student grade appeals must be processed in the regular semester immediately following the issuance of the grade in dispute (by commencement for fall or spring), regardless of whether the student is enrolled at the university. University policy protects students filing grievances and those who are witnesses from retaliation. Students who believe they are victims of retaliation should immediately contact the dean of the college in which the course is offered.

- A. The aggrieved student must first undergo the informal procedure of conferring with the instructor, stating the evidence (if any) and reasons for questioning that the grade received was not given in good faith. The instructor is obliged to review the matter, explain the grading procedure utilized, and show how the grade in question was determined. If the instructor is a graduate assistant and this interview does not resolve the difficulty, the student may then go to the faculty member in charge of the course (regular faculty member or director of the course sequence) with the problem.
- B. If the grading dispute is not resolved in step A, the student may appeal to the department chair or other appropriate chair of the area within the department (if any). The department chair may confer with the instructor to handle the problem. Step B applies only in departmentalized colleges.
- C. If these discussions are not adequate to settle the matter to the complainant's satisfaction, the student may then confer with the dean of the college concerned (or the dean-designate), who will review the case. If unresolved, the dean or designate may refer the case to the college academic grievance hearing committee to review the case formally. In most instances, however, the grievance procedure does not go beyond this level.

Formal. The following procedure takes place after steps A, B, and C (or A and C) have been completed.

- D. Each college has on file in the office of the dean (and in each department of the college) the procedures and composition of the undergraduate or graduate academic grievance hearing committee for student grievances. Each college committee shall operate under grievance procedures as stated, which satisfy due process requirements. The committee shall always meet with the stu-

dent and the instructor in an attempt to resolve the differences. At the conclusion of the hearing, the committee shall send its recommendations to the dean.

- E. Final action in each case is taken by the dean after full consideration of the committee's recommendation. Grade changes, if any are recommended, may be made by the dean. The dean shall inform the student, instructor, department chair (if any), the registrar, and the grievance committee of any action taken.

Scholarship

To be eligible for a degree in the Graduate College, a student must achieve two GPAs of "B" (3.00) or higher. The first GPA is based on all courses numbered 500 or higher that appear on the transcript. (Courses noted as deficiencies in the original letter of admission are not included.) The second GPA is based on all courses that appear on the program of study.

Graduate students (degree or nondegree) may retake any courses at any level at ASU, but all grades remain on the student transcript as well as in GPA calculations.

Academic excellence is expected of students doing graduate work. Upon recommendation from the head of the academic unit, the dean of the Graduate College can withdraw a student who is not progressing satisfactorily.

The designation of honors (such as *cum laude*) is reserved for undergraduates. The Graduate College does not use these academic distinctions.

Graduate Credit Courses

Courses at the 500, 600, and 700 levels are graduate credit courses. Courses at the 400 level apply to graduate degree requirements when appearing on an approved program of study. However, 400-level courses are not graduate courses by definition and cannot be certified as such for purposes of employment or transferring to other institutions.

Reserving of Course Credit by Undergraduates. Seniors at ASU within 12 semester hours of graduation may enroll in a 400-level or graduate-level course and reserve the credit for possible use in a future graduate program. The course cannot be used to meet a baccalaureate graduation requirement, however. Before registration in the class, the student must submit a Graduate College Petition form requesting credit reservation; the form must be signed by the student's advisor, the head of the academic unit offering the class, and the dean of the Graduate College.

Permission to reserve a course does not guarantee that the student is admitted to a graduate degree program or that the course may be used toward graduate degree requirements. A maximum of nine hours of credit may be reserved, and only courses with a grade of "B" (3.00) or higher are applicable. Reserved credit earned before admission to a graduate degree program is classified as nondegree credit. The maximum course load for a student enrolled in a reserved course is 15 semester hours during a regular semester and six hours during a summer session.

Transfer Credit. Transfer of credit is the acceptance of credit from another institution for inclusion in a program of study leading to a degree awarded by ASU. The number of hours transferred from other institutions may not exceed 20

percent of the total minimum semester hours required for a master's degree unless stated otherwise for a specific degree program.

Transfer credit taken before admission to a graduate degree program at ASU Main or East is nondegree credit. Nondegree credit taken at ASU Main or East combined with nondegree credit taken at another institution may not exceed nine semester hours on the master's program of study. The nine-hour limit does not apply to doctoral programs.

The date (month/day/year) on the Graduate College dean's letter of admission is the actual date of admission. If the student is enrolled in courses on the admission date, those courses—if applicable—may be considered part of a program of study. Courses taken the semester before this date are nondegree hours. Courses taken at ASU West are considered transferred credit.

Certain types of graduate credits cannot be transferred to ASU, including the following:

1. credits awarded by postsecondary institutions in the United States that lack candidate status or accreditation by a regional accrediting association;
2. credits awarded by postsecondary institutions for life experience;
3. credits awarded by postsecondary institutions for courses taken at noncollegiate institutions (e.g., government agencies, corporations, and industrial firms);
4. credits awarded by postsecondary institutions for noncredit courses, workshops, and seminars offered by other postsecondary institutions as part of continuing education programs; and
5. credits given for extension courses.

Acceptable academic credits earned at other institutions that are based on a unit of credit different from the ones prescribed by the Arizona Board of Regents are subject to conversion before being transferred to ASU.

Graduate College policy does not permit credits used for completion of a degree at another institution to be applied toward completion of a degree of equal or lower level at ASU. For these transfer hours to be used toward the completion of an ASU program of study, students must provide evidence that these hours were not counted toward the previous degree.

Transfer credits must be acceptable toward graduate degrees at the institution where the courses were completed. Only resident graduate courses (at the institution where the courses were completed) with a grade of "B" (3.00) or higher may be transferred. A course with the grade of pass, credit, or satisfactory may not be transferred.

Official transcripts of any transfer credit to be used on a program of study must be sent directly to the Graduate Admissions Office from the Office of the Registrar at the institution where the credit was earned.

Graduate Supervisory Committees

When the program of study is filed, upon the recommendation of the head of the academic unit, the dean of the Graduate College appoints a graduate student's supervisory committee, consisting of a chair and other resident faculty members. The number of members serving on this committee depends on the degree program.

Academic professionals (e.g., research scientists, research engineers), nontenure-track faculty (e.g., adjunct professors, research professors), and individuals granted affiliated faculty status through established university procedures may serve as cochairs, members, or extra members of thesis and dissertation committees upon approval by the Graduate College. Individuals who are recommended by an academic unit as eligible to serve as a cochair must meet the criteria established by the academic unit and be approved by the Graduate College.

Upon the recommendation of the committee chair and head of the academic unit, ASU West tenured (or tenure-track) faculty may serve on master's and doctoral committees at ASU Main. ASU West tenured (or tenure-track) faculty may serve as cochairs for thesis and dissertation committees at ASU Main upon the recommendation of the head of the academic unit and approval of the dean of the Graduate College. Cochairs must meet the academic unit's criteria for chairing theses and dissertation committees.

Qualified individuals outside the university, upon the recommendation of the head of the academic unit and approval of the Graduate College, may serve as members of thesis and dissertation committees; however, such individuals may not serve as chairs or cochairs (unless they have affiliated faculty status). With the approval of the academic unit and the dean of the Graduate College, former ASU faculty with students completing their degrees may continue to serve as cochairs. At least half of the committee must be faculty from ASU Main.

Foreign Language Requirements

A graduate degree program may require proficiency in a foreign language. If a foreign language is required, students must demonstrate at least a reading knowledge in the area of study required by the supervisory committee and consistent with the requirements for the graduate degree program. Normally, the language is selected from French, German, Russian, or Spanish, although other languages may be recommended when there is adequate justification.

Students who are required to demonstrate proficiency in a foreign language must pass a foreign language examination specific to their particular graduate program. The examinations are administered three times each year by the Department of Languages and Literatures, which certifies language competency. The chair of the student's supervisory committee is responsible for providing the Department of Languages and Literatures with materials from which the examination is then prepared. The chair should submit or recommend relevant books or journals of approximately 200 pages in length in the desired foreign language.

A student may petition the Graduate College for a re-examination but must pass the examination in no more than three attempts.

Theses and Dissertations

The master's thesis or equivalent is an introduction to research writing. All doctoral degree candidates must submit a dissertation, with the exception of the Doctor of Musical Arts degree in Music (with a concentration in conducting or performance), which requires three recitals and a research paper. The Ph.D. dissertation should be a valuable educational experience that demonstrates the candidate's

GRADUATE COLLEGE

mastery of research methods, theory, and tools of the discipline. It should demonstrate the candidate's ability to address a major intellectual problem and to propose meaningful questions and hypotheses. The dissertation should be a contribution to knowledge that is worthy of publication by an established press as a book or monograph or as one or more articles in a reputable journal.

For format, the Graduate College must review the final copy of the master's thesis, doctoral dissertation, and other final documents that are required to be placed in the library. Copies of the *Format Manual* are available in the Graduate College and at www.asu.edu/graduate/format on the Web. The student is required to submit a complete copy of the thesis or dissertation for format review at least 10 working days (two weeks if there are no holidays during the time period) before the oral defense. Doctoral students are also encouraged to submit a completed Survey of Earned Doctorates Awarded in the United States, conducted by the National Research Council.

Graduate students and their supervisory committee chairs jointly select a style guide or journal format representative of the field of study. The Graduate College allows certain flexibility in the format of the manuscript, but Graduate College and library guidelines must be followed.

The student must submit two final copies of a thesis or dissertation to the ASU Bookstore for binding. The student is responsible for the binding fees. Bound copies are placed in the Hayden Library and Archives. Doctoral students must submit one copy of the title page, approval page, and abstract (which must not exceed 350 words); the original signature of the doctoral student must appear on the University Microfilms International (UMI) Dissertation Agreement Form. The student is responsible for the UMI microfilming fee, which covers the expense of having the document sent to UMI, where it is microfilmed and cataloged. Information on the dissertation later appears in *Dissertation Abstracts International*.

Application for Graduation

Students should apply for graduation with the Graduation section of the Office of the Registrar no later than the date specified in the "Graduate College Calendar," found in the *Graduate Catalog*. All fees are payable at that time. Students applying for graduation after the deadline listed in the calendar are required to pay a late fee. At the end of the semester in which a student applies for graduation, the student is officially notified of any requirements the student has not yet completed.

Students are requested to complete a questionnaire that serves as a graduate student exit survey.

Students who do not complete all degree requirements by their anticipated graduation date are required to pay a refiling fee.

Summer Sessions

Work taken during the summer sessions carries the same scholastic recognition as that taken during the regular semester. A complete schedule of offerings is available in the *Summer Sessions Bulletin*, which may be obtained from the Office of Summer Sessions.

Dates and Deadlines

The "Graduate College Calendar," in the *Graduate Catalog*, lists deadlines for the submission of theses and dissertations to the Graduate College, the last day to apply for graduation, the last day to hold an oral defense of a thesis or dissertation, and the last day to submit theses and dissertations to the ASU Bookstore for binding. This information is also available on the Web at www.asu.edu/graduate/resources/generalinfo/GradDdlns.

Student Responsibility

The graduate students are responsible for knowing and observing all procedures and requirements of the Graduate College as defined in the *Graduate Catalog*, the *Schedule of Classes*, and the *Format Manual*. Each student should also be informed about the requirements concerning his or her degree program and any special requirements within the academic unit.

ACADEMIC INTEGRITY

The highest standards of academic integrity are expected of all students. The failure of any student to meet these standards may result in suspension or expulsion from the university and/or other sanctions as specified in the academic integrity policies of the individual colleges.

Violations of academic integrity include, but are not limited to, cheating, fabrication, tampering, plagiarism, or facilitating such activities.

The university academic integrity policy is available at the Office of the Executive Vice President and Provost of the University, or as part of the *Student Affairs Policies and Procedures Manual*—STA 104-01, at www.asu.edu/aad/manuals/sta/sta104-01.html on the Web.

MISCONDUCT IN SCHOLARLY RESEARCH AND CREATIVE ACTIVITIES

Students are expected to maintain the highest standards of integrity and truthfulness in scholarly research and creative activities. Misconduct in scholarly research and creative activities includes, but is not limited to, fabrication, falsification or misrepresentation of data, and plagiarism. Misconduct by any student may result in suspension or expulsion from the university and other sanctions as specified by the individual colleges. Policies on misconduct are available in the Office of the Vice President for Research and Economic Affairs and on the Web at www.asu.edu/aad/manuals/rsp/rsp111.html.

Policies and Procedures of the Graduate Council Appeals Board

The Graduate Council Appeals Board (GCAB) acts as the appeals body for graduate students seeking redress on academic decisions regarding their graduate program. Before filing an appeal, the graduate student should discuss the situation with the associate dean of the Graduate College to explore resolution of the matter at the unit or college level.

For more information, see the *Graduate Catalog*.

ASU Graduate Degrees

Graduate degrees, majors, and concentrations offered by ASU Main, ASU East, and ASU West and through ASU Extended Campus are shown in the “ASU Graduate Degrees” table below, organized by the name of the major. The table includes only officially approved concentrations; other informal areas of study may be available. See also the “Concurrent and Dual Degrees” table, page 508.

ASU offers these graduate degrees, abbreviated in the table below and elsewhere in the catalog:

Master of Accountancy and Information Systems (M.A.I.S.)
 Master of Architecture (M.Arch.)
 Master of Arts (M.A.)
 Master of Business Administration (M.B.A.)
 Master of Computer Science (M.C.S.)
 Master of Counseling (M.C.)
 Master of Education (M.Ed.)
 Master of Engineering (M.Eng.)
 Master of Environmental Planning (M.E.P.)
 Master of Fine Arts (M.F.A.)

Master of Health Services Administration (M.H.S.A.)
 Master of Mass Communication (M.M.C.)
 Master of Music (M.M.)
 Master of Natural Science (M.N.S.)
 Master of Physical Education (M.P.E.)
 Master of Public Administration (M.P.A.)
 Master of Public Health (M.P.H.)
 Master of Science (M.S.)
 Master of Science in Design (M.S.D.)
 Master of Science in Engineering (M.S.E.)
 Master of Science in Technology (M.S.Tech.)
 Master of Social Work (M.S.W.)
 Master of Taxation (M.Tax.)
 Master of Teaching English as a Second Language (M.TESL)
 Doctor of Audiology (Au.D.)
 Doctor of Education (Ed.D.)
 Doctor of Musical Arts (D.M.A.)
 Doctor of Philosophy (Ph.D.)
 Juris Doctor (J.D.)

ASU Graduate Degrees

Major	Degree	Concentration ¹	Campus
Accountancy and Information Systems	M.A.I.S.	—	Main
Aerospace Engineering	M.S., M.S.E., Ph.D.	—	Main
Agribusiness	M.S.	Optional: agribusiness management and marketing, or food quality assurance ¹	East
Anthropology	M.A.	Archaeology, bioarchaeology, linguistics, museum studies, physical anthropology, or social-cultural anthropology	Main
	Ph.D.	Archaeology, physical anthropology, or social-cultural anthropology	Main
Applied Psychology	M.S.	—	East
Architecture	M.Arch.	—	Main
Art	M.A.	Art education or art history	Main
	M.F.A.	Ceramics, digital technology, drawing, fibers, intermedia, metals, painting, photographic studies, photography, printmaking, sculpture, or wood	Main
Asian Languages and Civilizations—Chinese/Japanese	M.A.	—	Main
Audiology	Au.D.	—	Main

¹ If a major offers concentrations, one must be selected unless noted as *optional*.

² Applications are not being accepted at this time.

³ This collaborative program is offered by the three state universities.

⁴ This major is jointly offered with the University of Arizona.

⁵ Students apply to this degree program through the College of Law, not the Graduate College.

ASU GRADUATE DEGREES

ASU Graduate Degrees (continued)

Major	Degree	Concentration ¹	Campus
Bioengineering	M.S., Ph.D.	—	Main
Biology	M.S., Ph.D.	Optional: ecology ¹	Main
Building Design	M.S.	Design knowledge and computing, energy performance and climate-responsive architecture, or facilities development and management	Main
Business Administration	M.B.A.	—	Main West Extended
	Ph.D.	Accountancy, computer information systems, finance, health services research, ² management, marketing, or supply chain management	Main
Chemical Engineering	M.S., M.S.E., Ph.D.	—	Main
Chemistry	M.S., Ph.D.	Analytical chemistry, biochemistry, geochemistry, inorganic chemistry, organic chemistry, physical chemistry, or solid-state chemistry	Main
Civil Engineering	M.S., M.S.E., Ph.D.	—	Main
Communication	M.A.	—	Main
	Ph.D.	Communicative development, intercultural communication, or organizational communication	Main
Communication Disorders	M.S.	—	Main
Communication Studies	M.A.	—	West
Composition	M.M.	Optional: interdisciplinary digital media and performance ¹	Main
Computational Biosciences	M.S.	—	Main
Computer Science	M.C.S.	—	Main
	M.S., Ph.D.	Optional: arts, media, and engineering ¹	Main
Construction	M.S.	Construction science, facilities, or management	Main
Counseling	M.C.	—	Main
Counseling Psychology	Ph.D.	—	Main
Counselor Education	M.Ed.	—	Main
Creative Writing	M.F.A.	—	Main
Criminal Justice	M.A.	—	West
Curriculum and Instruction	M.A.	Bilingual education, early childhood education, elementary education, English as a second language, Indian education, language and literacy, mathematics education, science education, secondary education, or social studies education	Main
		Bilingual education, early childhood education, elementary education, English as a second language, Indian education, language and literacy, mathematics education, professional studies, science education, secondary education, or social studies education	Main
	M.Ed.	Secondary education	Extended

¹ If a major offers concentrations, one must be selected unless noted as *optional*.

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ASU Graduate Degrees (continued)

Major	Degree	Concentration ¹	Campus
Curriculum and Instruction (continued)	Ed.D.	Bilingual education, curriculum studies, early childhood education, elementary education, ² English as a second language, Indian education, language and literacy, mathematics education, science education, secondary education, ² or social studies education	Main
	Ph.D.	Art education, curriculum studies, early childhood education, elementary education, English education, exercise and wellness education, language and literacy, mathematics education, physical education, science education, or special education	Main
Dance	M.F.A.	Optional: interdisciplinary digital media and performance ¹	Main
Design	M.S.D.	Graphic design, industrial design, or interior design	Main
Economics	M.S., Ph.D.	—	Main
Educational Administration and Supervision	M.Ed.	—	Main West
	Ed.D.	—	Main Extended
Educational Leadership and Policy Studies	Ph.D.	—	Main
Educational Psychology	M.A., M.Ed.	—	Main
	Ph.D.	Learning; lifespan developmental psychology; measurement, statistics, and methodological studies; or school psychology	Main
Educational Technology	M.Ed., Ph.D.	—	Main
Electrical Engineering	M.S., Ph.D.	Optional: arts, media, and engineering ¹	Main
	M.S.E.	—	Main Extended
Elementary Education	M.Ed.	Optional: bilingual education, educational technology, ESL education, or reading ¹	West
Engineering	M.Eng.	—	Main Extended
Engineering Science	M.S., Ph.D.	—	Main
	M.S.E.	Optional: executive embedded systems ¹	Main Extended
English	M.A.	Comparative literature, English linguistics, literature and language, or rhetoric and composition	Main
	Ph.D.	Literature or rhetoric/composition and linguistics	Main
Environmental Design and Planning	Ph.D.	Design; history, theory, and criticism; or planning	Main
Environmental Planning	M.E.P.	Landscape ecological planning, urban and regional development, or urban design ²	Main
Environmental Resources	M.S.	GIS/remote sensing, natural resource management, or range ecology	East
Exercise and Wellness	M.S.	—	East
Exercise Science	Ph.D.	Biomechanics, motor behavior/sport psychology, or physiology of exercise	Main

¹ If a major offers concentrations, one must be selected unless noted as *optional*.

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⁵ Students apply to this degree program through the College of Law, not the Graduate College.

ASU GRADUATE DEGREES

ASU Graduate Degrees (continued)

Major	Degree	Concentration ¹	Campus
Family and Human Development	M.S.	Optional: family studies ¹	Main
Family Science	Ph.D.	Optional: marriage and family therapy ¹	Main
French	M.A.	Comparative literature, linguistics, or literature	Main
Geography	M.A., Ph.D.	—	Main
Geological Sciences	M.S., Ph.D.	—	Main
German	M.A.	Comparative literature, language and culture, or literature	Main
Health Services Administration	M.H.S.A.	—	Main
Higher and Postsecondary Education	M.Ed., Ed.D.	Optional: higher education ¹	Main
History	M.A.	Asian history, British history, European history, Latin American history, public history, U.S. history, or U.S. Western history	Main
	Ph.D.	Asian history, British history, European history, Latin American history, or U.S. history	Main
History and Theory of Art ⁴	Ph.D.	—	Main
Humanities	M.A.	—	Main
Industrial Engineering	M.S., M.S.E., Ph.D.	—	Main
Information Management	M.S.	—	Main
Interdisciplinary Studies	M.A.	—	West
Justice Studies	M.S.	—	Main
	Ph.D.	Optional: criminal and juvenile justice; dispute resolution; law, justice, and minority populations; law, policy, and evaluation; or women, law, and justice ¹	Main
Kinesiology	M.S.	—	Main
Law ⁵	J.D.	—	Main
Mass Communication	M.M.C.	—	Main
Materials Engineering	M.S., M.S.E.	—	Main
Materials Science	M.S.	—	Main
Mathematics	M.A., Ph.D.	—	Main
Mechanical Engineering	M.S., M.S.E., Ph.D.	—	Main
Microbiology	M.S., Ph.D.	—	Main
Molecular and Cellular Biology	M.S., Ph.D.	—	Main
Music	M.A.	Ethnomusicology, music history and literature, or music theory	Main
	D.M.A.	Conducting, interdisciplinary digital media and performance, music composition, music education, or performance	Main
Music Education	M.M.	Choral music, general music, instrumental music, jazz studies	Main
Natural Science	M.N.S.	Biology, chemistry, geological sciences, mathematics, microbiology, physics, or plant biology	Main

¹ If a major offers concentrations, one must be selected unless noted as *optional*.

² Applications are not being accepted at this time.

³ This collaborative program is offered by the three state universities.

⁴ This major is jointly offered with the University of Arizona.

⁵ Students apply to this degree program through the College of Law, not the Graduate College.

ASU Graduate Degrees (continued)

Major	Degree	Concentration ¹	Campus
Nursing	M.S.	Adult health nursing, community health nursing, family health nursing, nursing administration, ² parent-child nursing, psychiatric/mental health nursing, or women's health	Main Extended
Nutrition	M.S.	—	East
Performance	M.M.	Music theatre/opera musical direction, music theatre/opera performance, performance, performance pedagogy, or piano accompanying	Main
Philosophy	M.A., Ph.D.	—	Main
Physical Education	M.P.E.	—	Main
Physics	M.S., Ph.D.	—	Main
Plant Biology	M.S., Ph.D.	Optional: ecology or photosynthesis ¹	Main
Political Science	M.A., Ph.D.	American politics, comparative politics, international relations, or political theory	Main
Psychology	Ph.D.	Behavioral neuroscience, clinical psychology, cognitive/behavioral systems, developmental psychology, quantitative research methods, or social psychology	Main
Public Administration	M.P.A.	Optional: nonprofit administration ¹	Main Extended
	Ph.D.	—	Main
Public Health ³	M.P.H.	Community health practice or health administration and policy	Main
Recreation	M.S.	—	Main
Religious Studies	M.A., Ph.D.	—	Main
Science and Engineering of Materials	Ph.D.	High-resolution nanostructure analysis or solid-state device materials design	Main
Secondary Education	M.Ed.	Optional: educational technology ¹	West
Social and Philosophical Foundations of Education	M.A.	—	Main
Social Work	M.S.W.	Advanced direct practice or planning, administration, and community practice Advanced generalist practice	Main Extended West
	Ph.D.	—	Main
Sociology	M.A., Ph.D.	—	Main
Spanish	M.A.	Comparative literature, language and culture, linguistics, or literature	Main
	Ph.D.	Cultural studies or literature	
Special Education	M.A.	—	Main
	M.Ed.	Gifted, mildly disabled, multicultural exceptional, or severely/multiply disabled Infants and young children	Main West
Speech and Hearing Science	Ph.D.	Developmental neurolinguistic disorders, neuroauditory processes, or neurogerontologic communication disorders	Main
Statistics	M.S.	—	Main
Taxation	M.Tax.	—	Main
Teaching English as a Second Language	M.TESL	—	Main

¹ If a major offers concentrations, one must be selected unless noted as *optional*.

² Applications are not being accepted at this time.

³ This collaborative program is offered by the three state universities.

⁴ This major is jointly offered with the University of Arizona.

⁵ Students apply to this degree program through the College of Law, not the Graduate College.

ASU GRADUATE DEGREES

ASU Graduate Degrees (continued)

Major	Degree	Concentration ¹	Campus
Technology	M.S.Tech.	Aeronautical engineering technology, aviation human factors, aviation management technology, computer systems engineering technology, electronic systems engineering technology, environmental technology management, fire service administration, global technology and development, information technology, instrumentation and measurement technology, management of technology, manufacturing engineering technology, mechanical engineering technology, microelectronics engineering technology, or security engineering technology	East
		Environmental technology management	Extended
Theatre	M.A.	—	Main
	M.F.A.	Interdisciplinary digital media, performance, scenography, or theatre for youth	Main
	Ph.D.	Optional: theatre for youth ¹	Main

¹ If a major offers concentrations, one must be selected unless noted as *optional*.

² Applications are not being accepted at this time.

³ This collaborative program is offered by the three state universities.

⁴ This major is jointly offered with the University of Arizona.

⁵ Students apply to this degree program through the College of Law, not the Graduate College.

Concurrent and Dual Degrees

Degrees	Administered By
J.D./M.B.A.	College of Law/W. P. Carey School of Business
J.D./M.H.S.A.	College of Law/School of Health Administration and Policy
J.D./M.S. in Economics ¹	College of Law/Department of Economics
J.D./Ph.D. in Justice Studies	College of Law/School of Justice Studies
M.A. in Anthropology/M.S. in Justice Studies	Department of Anthropology/School of Justice Studies
M.A.I.S./M.B.A.	W. P. Carey School of Business
M.Arch./M.B.A.	School of Architecture/W. P. Carey School of Business
M.B.A./M.H.S.A.	W. P. Carey School of Business
M.B.A./M.S. in Economics	W. P. Carey School of Business
M.B.A./M.S. in Information Management	W. P. Carey School of Business
M.B.A./M.Tax.	W. P. Carey School of Business
M.B.A./Master of International Management	W. P. Carey School of Business/American Graduate School of International Management (Thunderbird), Graduate School of Business Administration (Peru); Graduate School of Commerce (France); Monterrey Institute for Technical and Superior Studies, Mexico State Campus (Mexico); and Carlos III University of Madrid (Spain)
M.S. in Nursing/M.P.H. ²	College of Nursing/College of Public Health
M.S.E. in Industrial Engineering/Master of International Management of Technology	Department of Industrial Engineering/American Graduate School of International Management (Thunderbird)

¹ Applications for this program are not being accepted at this time.

² This program is jointly offered with the University of Arizona and Northern Arizona University.

International Programs

ipo.asu.edu

William G. Davey, Ph.D., Director

PURPOSE

Arizona State University is an internationally recognized research and doctoral granting institution. The International Programs Office (IPO) is responsible for developing and implementing a wide variety of international policies and activities. As part of the Office of the Executive Vice President and Provost, IPO administers university study programs abroad, visiting scholar programs at ASU, and protocol for international visitors. In cooperation with academic and administrative units, IPO develops the international policies for ASU, represents the international interests of the university to the community at large, administers scholarships for studying abroad, supports faculty exchanges, and facilitates joint international research and training projects. IPO also represents the university's international interests to professional organizations and government agencies. The Office of Immigration Programs for International Faculty and Scholars within IPO assumes responsibility for international visitors who come to work, study, or conduct research on the ASU campuses, and also operates one of the nation's first U.S. Passport Offices located at a state university.

ACADEMIC PROGRAMS

The Department of State-sponsored IIE Open Doors report ranks ASU as one of the nation's top twenty institutions in terms of student international mobility. In increasing numbers, students have chosen ASU because of its excellence in undergraduate programs and extensive international study opportunities.

Two types of programs—study abroad and student exchange—are designed to enhance the academic development, professional preparation, and international perspective of students.

IPO offers more than 200 fall and spring semester and year-long international programs for ASU resident credit. Students on an official study abroad or exchange program retain full-time student status and the catalog status they held at the time of their departure. See the "Semester and Academic Year Study Abroad and Exchange Programs" table, page 510.

Exchange Programs. Exchange programs are those in which ASU students may study at a foreign institution, in return for which students from that institution have a reciprocal opportunity to study at ASU. ASU students simply pay their normal registration fees and tuition at ASU. For exchange programs, ASU registration fees and tuition may be paid by scholarships or waivers. Financial aid may, in most cases, be applied to the costs of exchange programs. Exchange programs offer students the chance to enter mainstream university life in the country of their choice. Nor-

mally, participation in an exchange program is dependent on prior attainment of an adequate level of language competence to be able to function in classes in the host country.

In several instances, students may have the opportunity to obtain advanced-level intensive language instruction for approximately one month in the host country before the start of the academic term.

Diverse program locations for students proficient in the host language include Chile, Ecuador, France, Germany, Italy, Mexico and more. Students desiring exchange programs with English as the language of instruction may consider programs in not only Australia, England, New Zealand, and Scotland, but also Austria, Netherlands, Scandinavia, and Thailand. IPO also offers special exchanges in Japan, Italy, and Mexico where both English and the host language may be used.

Study Abroad Programs. IPO offers a world of study abroad programs, which are distinct from exchange programs in two ways: (1) rather than pay one's ASU tuition for the terms abroad as exchange programs require, participants simply pay a program fee to IPO that covers costs associated with that particular program, and financial aid may be applied to the program fee; (2) there is no reciprocal exchange of students (no foreign students come to ASU for the participants IPO sends abroad).

IPO Exchange and study abroad programs are administered in three ways:

1. direct programs,
2. partnership programs, and
3. specialty programs.

Direct Programs. ASU offers numerous study abroad and exchange program destinations through direct affiliation with overseas schools and universities. IPO direct programs can accommodate students from nearly every ASU major and suit a variety of personal preferences.

Partnership Programs. IPO works in conjunction with select major national program providers, such as the *American Institute for Foreign Study* (AIFS), *International Studies Abroad* (ISA), the *Institute for Study Abroad, Butler University* (ISA, Butler), and the *Council for International Education Exchange* (CIEE), to expand the number of quality program choices available to ASU students. Partnership programs offer opportunities for ASU students to study abroad through IPO on programs offered by these reputable partners while still maintaining enrollment at ASU, allowing access to ASU financial aid and resulting in ASU resident credit.

INTERNATIONAL PROGRAMS

Specialty Programs. Specialty programs are specifically designed by one academic unit (ASU school, college, or department), are partly administered by that unit in cooperation with IPO, and are available to only students from that academic area. Specialty programs are offered by the ASU West College of Human Services (for social work), the College of Education (for student teaching), the College of Law, the Department of Kinesiology, the Morrison School of Agribusiness and Resource Management, the School of Architecture, and the W. P. Carey School of Business.

International Programs maintains close ties with ASU's area studies programs, including the Center for Asian Studies, the programs in Korean Studies and Southeast Asian Studies, the Latin American Studies Center, the Russian and East European Studies Consortium, and Scandinavian Studies. Many IPO programs are specifically designed for students in these areas.

Close relationships are maintained with a number of academic units on campus. The Barrett Honors College cooperates in the creation of special programs for the benefit of its students. The Department of Languages and Literatures assists in the staffing and management of a number of study abroad programs, especially those related to language acquisition. The W. P. Carey School of Business and College of Liberal Arts and Sciences maintain advising services and offer scholarships for their students intending to study abroad. The Ira A. Fulton School of Engineering and the Corporate Leaders Program also actively place students in study programs and internships around the world.

Procedures. Students interested in participating in such programs should contact the International Programs Office in TMPCT 198.

IPO assists students through every stage of planning, preparation, participation, and return from exciting international educational experiences. International Program coordinators are available to assist students in choosing a program that meets one's academic, personal, and professional goals.

Information on programs can be obtained from the International Programs Office in TMPCT 198, from the IPO Web page at ipo.asu.edu, or by phone at 480/965-5965.

How to Apply. Before participating in a study abroad or an exchange program, students must complete an IPO Eligibility Application, available on the Web at ipo.asu.edu. Eligible students are then directed to attend an advising session with IPO or the specialty program sponsoring academic unit. Applicants are guided through additional application procedures that are specific to the student's particular international program. After the application process is completed, students attend predeparture orientations conducted by IPO. These presentations are designed to prepare participants for a comfortable and rewarding international experience.

Immigration Programs for International Faculty and Scholars. The International Faculty and Scholars Office (Immigration/Employment Visa Services) of the IPO is responsible for administration of the university's Exchange Visitor Program and Employment-Based Visa Programs. The responsibilities of this office also include providing information, guidance, and advice to the various departments, programs, and colleges of ASU Main, ASU East, and ASU West, as well as to the university's faculty, staff, students, and guests on questions and issues related to the university's J-1 Exchange Visitor and Employment-Based Visa programs and other immigration-related issues.

Semester and Academic Year Study Abroad and Exchange Programs¹

Country	City	University/Institution	Study Category ²	Semesters Available ³	Study Areas ⁴
Argentina	Buenos Aires	University Torcuato di Tella (business majors only)	EX	F, S, AY	B
	Buenos Aires	University Torcuato di Tella (Butler ⁵)	SA	F, S, AY	B L O
	Buenos Aires	University Torcuato di Tella (law majors only)	EX	F, S, AY	O
	Buenos Aires	University of Belgrano	SA	F, S, AY	B C E H L O
	Buenos Aires	University of Belgrano (ISA ⁵)	SA	F, S, AY	B C E H L O
	Buenos Aires	University of Buenos Aires (Butler and CIEE ⁵)	SA	F, S, AY	F H L
	Buenos Aires	University of Salvador (Butler ⁵)	SA	F, S, AY	B E H L
	Buenos Aires	Pontificia Catholic University Argentina (Butler and CIEE ⁵)	SA	F, S, AY	C F H L
	Buenos Aires	Latin American Faculty of Social Sciences (CIEE ⁵)	SA	F, S, AY	C H L

¹ Information is subject to change without notice.

² Study category abbreviations: SA = study abroad, EX = exchange, Both = study abroad and exchange

³ Semesters available abbreviations: F = fall, S = spring, AY = all year

⁴ Study areas abbreviations: B = business, C = communication, F = fine arts, E = engineering/sciences, H = humanities/social sciences, I = internship, L = languages, O = other

⁵ Acronyms used in the table: AIFS (American Institute for Foreign Study), Butler (Institute for Study Abroad, Butler University), CIEE (Council for International Education Exchange), and ISA (International Studies Abroad)

INTERNATIONAL PROGRAMS
Semester and Academic Year Study Abroad and Exchange Programs¹ (continued)

Country	City	University/Institution	Study Category ²	Semesters Available ³	Study Areas ⁴
(Argentina)	Mendoza	National University of Cuyo (Butler ⁵)	SA	F, S, AY	F H L O
Armenia	Yeravan	Yeravan State University	SA	F, S, AY	L
Australia	Adelaide	University of Adelaide (Butler ⁵)	SA	F, S, AY	B E F H L
	Brisbane	Queensland University of Technology	Both	F, S, AY	B C E F H O
	Brisbane	University of Queensland (Butler and ISA ⁵)	SA	F, S, AY	B E H L
	Brisbane and Gold Coast	Griffith University (Butler ⁵)	SA	F, S, AY	B C E F H L
	Canberra	Australian National University (Butler ⁵)	SA	F, S, AY	B E F H L
	Hobart and Launceston	University of Tasmania (Butler ⁵)	SA	F, S, AY	E F H O
	Lismore	Southern Cross University (Butler ⁵)	SA	F, S, AY	B F H
	Melbourne	La Trobe University (CIEE ⁵)	SA	F, S, AY	B E F H L
	Melbourne	Monash University (Butler ⁵)	SA	F, S, AY	B C F H
	Melbourne	Royal Melbourne Institute of Technology	Both	F, S, AY	B C E F H L O
	Melbourne	University of Melbourne	SA	F, S, AY	B E F H L O
	Melbourne	University of Melbourne (Butler and CIEE ⁵)	SA	F, S, AY	B E F H L O
	Perth	Edith Cowan University	Both	F, S, AY	B C E F H O
	Perth	Murdoch University (Butler and CIEE ⁵)	SA	F, S, AY	B C H
	Perth	University of Western Australia (Butler ⁵)	SA	F, S, AY	E F H L
	Sydney	Macquarie University	Both	F, S, AY	B C E F H I L O
	Sydney	Macquarie University (AIFS, Butler, and CIEE ⁵)	SA	F, S, AY	B C E F H I L O
	Sydney	University of New South Wales (Butler ⁵)	SA	F, S, AY	E F H L
	Sydney	University of Sydney (Butler, CIEE, and ISA ⁵)	SA	F, S, AY	B E F H L O
Sydney	University of Technology (Butler ⁵)	SA	F, S, AY	B H O	
Townsville and Cairns	James Cook University (Butler ⁵)	SA	F, S, AY	B E F H	
Wollongong	University of Wollongong (Butler and CIEE ⁵)	SA	F, S, AY	E F H L	
Austria	Salzburg	University of Salzburg (AIFS ⁵)	SA	F, S, AY	B H I L O
Belgium	Brussels	Vesalius College at the Vrije Universiteit Brussels (CIEE ⁵)	SA	F, S, AY	C E H L
Brazil	Salvador da Bahia	Catholic University of Salvador (CIEE ⁵)	SA	F, S, AY	C F H L
	Salvador da Bahia	Federal University of Bahia (CIEE ⁵)	SA	F, S, AY	C F L
	São Paulo	University of São Paulo (CIEE ⁵)	SA	F, S, AY	B C F L
Canada	Québec	Laval University	EX	F, S, AY	B E F L O
	Saskatoon	University of Saskatchewan (agricultural business majors only)	EX	F, S, AY	O
	Toronto	University of Guelph (agricultural business majors only)	EX	F, S, AY	O
	Vancouver	University of British Columbia	EX	F, AY	B E F O

¹ Information is subject to change without notice.

² Study category abbreviations: SA = study abroad, EX = exchange, Both = study abroad and exchange

³ Semesters available abbreviations: F = fall, S = spring, AY = all year

⁴ Study areas abbreviations: B = business, C = communication, F = fine arts, E = engineering/sciences, H = humanities/social sciences, I = internship, L = languages, O = other

⁵ Acronyms used in the table: AIFS (American Institute for Foreign Study), Butler (Institute for Study Abroad, Butler University), CIEE (Council for International Education Exchange), and ISA (International Studies Abroad)

INTERNATIONAL PROGRAMS

Semester and Academic Year Study Abroad and Exchange Programs¹ (continued)

Country	City	University/Institution	Study Category ²	Semesters Available ³	Study Areas ⁴
(Canada)	Victoria	University of Victoria (law majors only)	EX	F, S, AY	O
	Waterloo	University of Waterloo (social work majors–graduate level only)	EX	F, S, AY	O
Chile	Santiago	Latin American Faculty of Social Sciences (CIEE ⁵)	SA	F, S, AY	H
	Santiago	Pontificia University of Chile (CIEE ⁵)	SA	F, S, AY	HL
	Santiago	Catholic University de Chile (Butler ⁵)	SA	F, S, AY	B E F H L
	Santiago	University of Chile (Butler and CIEE ⁵)	SA	F, S, AY	F H L
	Santiago	University of Santiago (CIEE ⁵)	SA	F, S, AY	B H L
	Valparaíso	Catholic University of Valparaíso (Butler, CIEE, and ISA ⁵)	SA	F, S	B C E F L O
China	Viña del Mar	Adolfo Ibañez University (business majors only)	EX	F, S, AY	B H
	Beijing	Peking University (CIEE ⁵)	SA	F, S, AY	C L
	Hong Kong	Hong Kong Polytechnic University (business majors only)	Both	F, S, AY	B
	Nanjing	Nanjing University (CIEE ⁵)	SA	F, S, AY	HL
	Shanghai	East China Normal University (CIEE ⁵)	SA	F, S, AY	HL
Costa Rica	Heredia	National Autonomous University (Butler ⁵)	SA	F, S, AY	B H L
	Monteverde	Monteverde (CIEE ⁵)	SA	F, S	E L
	San José	Lincoln School (student teachers only)	SA	F, S	O
	San José	Latin American University of Science and Technology (ISA ⁵)	SA	F, S, AY	E
Cuba	San José	University of Veritas (ISA ⁵)	SA	F, S, AY	B C F I L
	Havana	University of Havana (Butler and CIEE ⁵)	SA	F, S, AY	F L O
Czech Republic	Prague	Charles University (AIFS and CIEE ⁵)	SA	F, S, AY	B H L
	Prague	University of Economics (business majors only)	EX	F, S, AY	B
Denmark	Copenhagen	University of Copenhagen	EX	F, S, AY	E H L
Dominican Republic	Santiago	Pontificia Catholic University of the Mother and Teacher (CIEE ⁵)	SA	F, S, AY	B I L
	Santo Domingo	Latin American Faculty of Social Sciences—Dominican Republic (CIEE ⁵)	SA	F, S, AY	C H I
Ecuador	Quito	Pontificia Catholic University of Ecuador	Both	F, S, AY	B C E L O
Egypt	Cairo	American University in Cairo	SA	F, S, AY	B C E F L
England	Birmingham	University of Birmingham (kinesiology majors only)	EX	S, AY	O
	Brighton	University of Brighton (student teachers only)	EX	S	O
	Brighton	University of Sussex (Butler ⁵)	SA	F, S, AY	E F H
	Bristol	University of Bristol (Butler ⁵)	SA	F, S, AY	B E H
	Cambridge	Cambridge University (Butler ⁵)	SA	F, S, AY	E H
	Cambridge	The Institute of Economic and Political Studies Program (INSTEP)	SA	F, S, AY	B I
	Canterbury	University of Kent (Butler ⁵)	SA	F, S, AY	B F H

¹ Information is subject to change without notice.

² Study category abbreviations: **SA** = study abroad, **EX** = exchange, **Both** = study abroad and exchange

³ Semesters available abbreviations: **F** = fall, **S** = spring, **AY** = all year

⁴ Study areas abbreviations: **B** = business, **C** = communication, **F** = fine arts, **E** = engineering/sciences, **H** = humanities/social sciences, **I** = internship, **L** = languages, **O** = other

⁵ Acronyms used in the table: **AIFS** (American Institute for Foreign Study), **Butler** (Institute for Study Abroad, Butler University), **CIEE** (Council for International Education Exchange), and **ISA** (International Studies Abroad)

Semester and Academic Year Study Abroad and Exchange Programs¹ (continued)

Country	City	University/Institution	Study Category ²	Semesters Available ³	Study Areas ⁴
England	Colchester	University of Essex (Butler ⁵)	SA	F, S, AY	BEFH
	Coventry	University of Warwick (Butler ⁵)	SA	F, S, AY	BEHL
	Hull	University of Hull	EX	S, AY	BEFLO
	Lancaster	Lancaster University (Butler ⁵)	SA	F, S, AY	BEFH
	Leeds	University of Leeds	EX	S, AY	BCEFLO
	Leeds	University of Leeds (Butler ⁵)	SA	S, AY	BCEFLO
	Leicester	University of Leicester	EX	S, AY	BCEFIL
	London	American Intercontinental University	SA	F, S, AY	BCFIO
	London	Birbeck College (Butler ⁵)	SA	F, S, AY	BCFI
	London	King's College London (Butler ⁵)	SA	F, S, AY	EH O
	London	Laban's Centre London (Butler ⁵)	SA	F, S, AY	F
	London	London School of Economics and Political Science	SA	AY	BEL
	London	London Universities Program (CIEE ⁵)	SA	F, S	BFH
	London	Middlesex University (Butler ⁵)	SA	F, S, AY	BCFH
	London	Queen Mary, University of London (Butler ⁵)	SA	F, S, AY	BEH
	London	Richmond American International University (AIFS ⁵)	SA	F, S, AY	BCEFI
	London	School of Oriental and African Studies (Butler ⁵)	SA	F, S, AY	HL
	London	Slade School of Fine Art (Butler ⁵)	SA	F, S, AY	F
	London	University College London (Butler ⁵)	SA	F, S, AY	EH
	London	University of London, Goldsmiths College (CIEE ⁵)	SA	F, S, AY	FHL
	London	University of London, Imperial College (CIEE ⁵)	SA	AY	E
	London	University of Westminster (Butler and CIEE ⁵)	SA	F, S, AY	BCEHL
	Manchester	University of Manchester	EX	S, AY	BCEL
	Norwich	University of East Anglia (Butler ⁵)	SA	F, S, AY	BEFHL
	Nottingham	University of Nottingham (Butler ⁵)	SA	F, S, AY	BEHL
	Oxford	Oxford Brookes University (Butler ⁵)	SA	F, S, AY	BEH
	Oxford	Oxford University (Butler ⁵)	SA	F, S, AY	EHL
	Plymouth	University of Plymouth (business majors only)	EX	AY	B
	Reading	University of Reading (ISA ⁵)	SA	F, S, AY	EFHLO
	York	University of York (Butler ⁵)	SA	F, S, AY	HL
	France	Cannes	International College de Cannes (AIFS ⁵)	SA	F, S, AY
Grenoble		University of Grenoble	EX	S, AY	BCEFHILO
Grenoble		University of Grenoble (AIFS ⁵)	SA	F, S, AY	CFHL
Lille		Catholic University of Lille	EX	S	BCEHILO
Lille		Catholic University of Lille, Intensive Language	SA	F	L
Paris		Catholic University of Paris (ISA ⁵)	SA	F, S, AY	CFHL
Paris		Paris Center for Critical Studies (CIEE ⁵)	SA	F, S, AY	FHL
Paris		University of Paris IV (Sorbonne) (AIFS ⁵)	SA	F, S, AY	BFHL
Rennes		University of Haute Bretagne, Rennes II (CIEE ⁵)	SA	F, S, AY	HL

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³ Semesters available abbreviations: **F** = fall, **S** = spring, **AY** = all year

⁴ Study areas abbreviations: **B** = business, **C** = communication, **F** = fine arts, **E** = engineering/sciences, **H** = humanities/social sciences, **I** = internship, **L** = languages, **O** = other

⁵ Acronyms used in the table: **AIFS** (American Institute for Foreign Study), **Butler** (Institute for Study Abroad, Butler University), **CIEE** (Council for International Education Exchange), and **ISA** (International Studies Abroad)

INTERNATIONAL PROGRAMS

Semester and Academic Year Study Abroad and Exchange Programs¹ (continued)

Country	City	University/Institution	Study Category ²	Semesters Available ³	Study Areas ⁴	
(France)	Toulouse	Higher School of Commerce, Toulouse (business majors only)	EX	S, AY	B	
Germany	Berlin	Technical University of Berlin (TUBerlin)	EX	F, S, AY	E O	
	Frankfurt	European Business School (business majors only)	EX	F, S, AY	B	
	Frankfurt an der Oder	European University Viadrina (business majors only)	EX	S, AY	B	
	Heidelberg	University of Heidelberg	EX	AY	B H L O	
	Köln	Köln International School of Design (industrial design majors only)	EX	F	O	
	Regensburg	Regensburg University	EX	AY	B H L O	
	Stuttgart	Stuttgart University (architecture majors only)	EX	AY	B E H O	
	Tübingen	University of Tübingen	EX	F, S, AY	B E I L	
	Tübingen	Tübingen University, Intensive Language	SA	S	L	
Ghana	Legon	University of Ghana (CIEE ⁵)	SA	F, S, AY	B H L	
Greece	Athens	University of Laverne	Both	F, S, AY	B C H L O	
Hungary	Budapest	Budapest University of Economic Sciences and Public Administration (CIEE ⁵)	SA	F, S	B H L	
India	Hyderabad	University of Hyderabad (CIEE ⁵)	SA	F, S, AY	C E F H L	
Ireland	Ballyvaughn	Burren College of Art (Butler ⁵)	SA	F, S, AY	F	
	Belfast	Queen's University Belfast (Butler ⁵)	SA	F, S, AY	E H L	
	Coleraine, Newtown-abbey, Londonderry, or Belfast	University of Ulster (Butler ⁵)	SA	F, S, AY	B C E F H L	
	Cork	University College Cork	SA	F, S, AY	B E F H L	
	Cork	University College Cork (Butler ⁵)	SA	F, S, AY	B E F H L	
	Dublin	DBS School of Arts (CIEE ⁵)	SA	F, S, AY	B C H	
	Dublin	University College Dublin (business majors only)	SA	F, S, AY	B I	
	Dublin	University College Dublin (fine arts majors only)	SA	F, S, AY	F	
	Dublin	University College Dublin (Butler ⁵)	SA	F, S, AY	B F H L	
	Dublin	Trinity College (Butler ⁵)	SA	F, S, AY	B C E F H	
	Galway	National University of Ireland, Galway (Butler ⁵)	SA	F, S, AY	B E F H L	
	Limerick	University of Limerick (AIFS and Butler ⁵)	SA	F, S, AY	B C E H L O	
	Maynooth	National University of Ireland, Maynooth (Butler ⁵)	SA	F, S, AY	B E H L	
	Israel	Tel Aviv	Tel Aviv University	SA	F, S, AY	B F H L
	Italy	Castellanza	Carlo Cattaneo University (business majors only)	EX	F, S, AY	B E L
Ferrara		University of Ferrara (CIEE ⁵)	SA	F, S	H L	
Florence		Dante Alighieri Italian Linguistic Center	SA	F, S, AY	L	
Florence		Richmond in Florence (AIFS ⁵)	SA	F, S, AY	H I L O	
Rome		Richmond in Rome (AIFS ⁵)	SA	F, S, AY	B C H L	

¹ Information is subject to change without notice.

² Study category abbreviations: SA = study abroad, EX = exchange, Both = study abroad and exchange

³ Semesters available abbreviations: F = fall, S = spring, AY = all year

⁴ Study areas abbreviations: B = business, C = communication, F = fine arts, E = engineering/sciences, H = humanities/social sciences, I = internship, L = languages, O = other

⁵ Acronyms used in the table: AIFS (American Institute for Foreign Study), Butler (Institute for Study Abroad, Butler University), CIEE (Council for International Education Exchange), and ISA (International Studies Abroad)

INTERNATIONAL PROGRAMS

Semester and Academic Year Study Abroad and Exchange Programs¹ (continued)

Country	City	University/Institution	Study Category ²	Semesters Available ³	Study Areas ⁴
Japan	Hiroshima	Hiroshima Shudo University	EX	AY	BHL
	Nagoya	Nanzan University	EX	AY	BFHL
	Osaka	Kansai Gaidai University	EX	AY	BCHL
	Tokyo	Sophia University (CIEE ⁵)	SA	F, S, AY	BHL
	Wakayama	Wakayama University	EX	AY	BEHLO
Jordan	Amman	University of Jordan (CIEE ⁵)	SA	F, S, AY	HL
Macedonia	Skopje	University of Saints Cyril and Methodius	SA	F, S, AY	HL
Mexico	Guadalajara	Autonomous University of Guadalajara	EX	F, S, AY	BCEHILO
	Guadalajara	University of Guadalajara (agricultural business majors only)	EX	F, S, AY	O
	Guanajuato	University of Guanajuato (CIEE and ISA ⁵)	SA	F, S, AY	BFHIL
	Hermosillo	University of Sonora	EX	F, S, AY	BCEFHLO
	Mexico City	Autonomous Technological Institute of Mexico	EX	F, S, AY	BEH
	Mexico City	University of La Salle	EX	F, S, AY	BCEHL
	Monterrey	Autonomous University of Nuevo León	EX	F, S, AY	BCEFHLO
	Puebla	University of the Americas	EX	F, S, AY	BCEFHLO
	San Luis Potosi	University of San Luis Potosi (agricultural business majors only)	EX	F, S, AY	O
	Various cities in Mexico	Institute of Technology and Higher Studies of Monterrey	EX	F, S, AY	BCEHILO
Netherlands	Amsterdam	University of Amsterdam (CIEE ⁵)	SA	F, S, AY	CHL
	Maastricht	Maastricht University (business majors only)	EX	F, S, AY	B
New Zealand	Auckland	University of Auckland (Butler ⁵)	SA	F, S, AY	BCHLO
	Christchurch	University of Canterbury (Butler ⁵)	SA	F, S, AY	BEFHLO
	Dunedin	University of Otago (Butler ⁵)	SA	F, S, AY	BEFHL
	Hamilton	University of Waikato	Both	F, S, AY	BCEFHLO
	Palmerston North	Massey University (Butler ⁵)	SA	F, S, AY	BCHLO
	Wellington	Victoria University of Wellington (Butler ⁵)	SA	F, S, AY	EHL
Norway	Oslo	University of Oslo—Language Program	SA	F, S, AY	HLO
Poland	Warsaw	Leon Kozminski Academy of Entrepreneurship and Management (business majors only)	EX	F, S, AY	B
	Warsaw	Warsaw School of Economics (CIEE ⁵)	SA	F, S	BHL
Portugal	Lisbon and Faro	Center of Languages	SA	F, S, AY	L
Russia	Kazan	Kazan State University	SA	F, S, AY	HL
	St. Petersburg	St. Petersburg State Polytechnic University (AIFS ⁵)	SA	F, S, AY	HL
	St. Petersburg	St. Petersburg State University (CIEE ⁵)	SA	F, S	HL
Scotland	Edinburgh	Edinburgh College of Art (sculpture majors only)	EX	S	F
	Edinburgh	University of Edinburgh	EX	AY	BCEFHLL

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² Study category abbreviations: SA = study abroad, EX = exchange, Both = study abroad and exchange

³ Semesters available abbreviations: F = fall, S = spring, AY = all year

⁴ Study areas abbreviations: B = business, C = communication, F = fine arts, E = engineering/sciences, H = humanities/social sciences, I = internship, L = languages, O = other

⁵ Acronyms used in the table: AIFS (American Institute for Foreign Study), Butler (Institute for Study Abroad, Butler University), CIEE (Council for International Education Exchange), and ISA (International Studies Abroad)

INTERNATIONAL PROGRAMS

Semester and Academic Year Study Abroad and Exchange Programs¹ (continued)

Country	City	University/Institution	Study Category ²	Semesters Available ³	Study Areas ⁴
(Scotland)	Edinburgh	University of Edinburgh (Butler ⁵)	SA	F, S, AY	B C E F H L
	Glasgow	University of Glasgow (Butler ⁵)	SA	F, S, AY	B E F H L
	Glasgow	Glasgow School of Art (Butler ⁵)	SA	F, S, AY	F
	Glasgow	University of Strathclyde (business majors only)	EX	F, S, AY	B C E H L O
	St. Andrews	University of St. Andrews (Butler ⁵)	SA	F, S, AY	E H
	Stirling	University of Stirling (Butler ⁵)	SA	F, S, AY	B E F H
Senegal	Dakar	Baobab Center/Cheikh Anta Diop University (CIEE ⁵)	SA	F, S, AY	F H L
Singapore	Singapore	Singapore Management University (business majors only)	EX	F, S, AY	B
South Africa	Cape Town	University of Cape Town (CIEE ⁵)	SA	F, S, AY	B F H L
	Stellenbosch	University of Stellenbosch (AIFS ⁵)	SA	F, S, AY	B F H
South Korea	Seoul	Yonsei University Korean Language Institute	EX	F, S, AY	H L
Spain	Alcalá de Henares	University of Alcalá (CIEE ⁵)	SA	F, S, AY	B H L
	Alicante	University of Alicante	SA	S	H L
	Alicante	University of Alicante (CIEE ⁵)	SA	F, S, AY	H L
	Barcelona	University of Barcelona/Menéndez Pelayo International University (ISA ⁵)	SA	F, S, AY	H L
	Barcelona	Pompeu Fabra University (CIEE and ISA ⁵)	SA	F, S, AY	B F H L O
	Granada	University of Granada (AIFS and ISA ⁵)	SA	S, AY	H L
	Madrid	Carlos III University (business majors only)	EX	S, AY	B
	Madrid	University Complutense of Madrid—advanced (ISA ⁵)	SA	F, S, AY	F H L
	Madrid	University Complutense of Madrid—all levels (ISA ⁵)	SA	F, S, AY	F H L
	Salamanca	University of Salamanca (AIFS and ISA ⁵)	SA	F, S, AY	H L
	Sevilla	University of Sevilla (CIEE and ISA ⁵)	SA	F, S, AY	B H L
	Sevilla	Menéndez Pelayo International University (ISA ⁵)	SA	F, S, AY	B H L O
	Valencia	Polytechnic University of Valencia/University of Valencia (ISA ⁵)	SA	S, AY	B E L O
	Sweden	Kalmar	University of Kalmar	EX	F, S, AY
Örebro		Orebro University	EX	F, S, AY	B C H L O
Taiwan	Taipei	National Chengchi University (CIEE ⁵)	SA	F, S, AY	B F H L
Thailand	Bangkok	Thammasat University	EX	F, S, AY	B H L
	Khon Kaen	Khon Kaen University (CIEE ⁵)	SA	F, S, AY	H L
Turkey	Ankara	Bilkent University/Middle East Technical University (CIEE ⁵)	SA	F, S	B C E F H
	Eskisehir	Anadolu University	EX	S, AY	B C E F H L O
	Istanbul	Bogazici University (business majors only)	EX	F, S, AY	B
Vietnam	Hanoi	Vietnam National University (CIEE ⁵)	SA	F, S, AY	F H L
Various	Three cities	Multicountry semester in Mexico, Argentina, and Spain	SA	F, S	B H L
	Various ports	Semester at Sea	SA	F, S, AY	B C F H O

¹ Information is subject to change without notice.

² Study category abbreviations: SA = study abroad, EX = exchange, **Both** = study abroad and exchange

³ Semesters available abbreviations: F = fall, S = spring, AY = all year

⁴ Study areas abbreviations: B = business, C = communication, F = fine arts, E = engineering/sciences, H = humanities/social sciences, I = internship, L = languages, O = other

⁵ Acronyms used in the table: AIFS (American Institute for Foreign Study), **Butler** (Institute for Study Abroad, Butler University), CIEE (Council for International Education Exchange), and ISA (International Studies Abroad)

Summer Sessions

www.asu.edu/summer

Carol Switzer, M.S., Director

PURPOSE

Summer Sessions offers more than 4,000 fully accredited courses and provides an opportunity for students to begin or continue academic work on a year-round basis. Summer courses are equivalent to fall and spring courses in terms of content, credit awarded, and the standards expected of students regarding academic performance.

The program offers two five-week sessions and one eight-week session. See "University Calendar," page 18, for specific dates.

All ASU Main courses (except some KIN courses) are held in air-conditioned classrooms or laboratories. A number of courses are offered at off-campus locations.

Through various summer study programs, ASU also offers students the opportunity to earn credit while studying in foreign countries. These programs are directed by ASU faculty and have been approved by the appropriate academic unit.

For more information, visit the Summer Sessions Web site at www.asu.edu/summer.

Admission and Registration. The admission and registration process for summer sessions begins when the *Summer Sessions Bulletin* is distributed during the last week of January.

Admission. All students must be admitted to ASU for the summer as nondegree students before enrolling, except continuing students who attend during the previous spring semester. New students admitted for the fall semester following the current summer must process the summer nondegree admission form before enrolling. The submission of transcripts or test scores is not required to attain this status.

Readmission. ASU students not enrolled during the spring semester preceding the current summer must be readmitted. See "Readmission to the University," page 77.

Conditional admission before graduation from high school may be granted. See "Admission Before Receipt of Final Transcript," page 66.

Advising. All students are strongly encouraged to seek academic advising before enrolling in summer courses. See "Academic Advising," page 76.

Bulletin. The *Summer Sessions Bulletin*, which contains the class schedule and the registration procedure, is available the last week of January at the Office of Summer Sessions, ADM B167, and at all registrar sites. The *Summer Sessions Bulletin* is also available on the Web at www.asu.edu/summer.

To request the *Summer Sessions Bulletin*, summer study abroad brochures, or other summer information, call 480/965-6611, or write

SUMMER SESSIONS
ARIZONA STATE UNIVERSITY
PO BOX 870601
TEMPE AZ 85287-0601

Food Services. Meal plans are available. For more information, call 480/965-3464, or write

SODEXHO SERVICES
ARIZONA STATE UNIVERSITY
PO BOX 870901
TEMPE AZ 85287-0901

Housing. Air-conditioned dormitories are available for ASU Main students. For more information, call 480/965-3515, or write

RESIDENTIAL LIFE
ARIZONA STATE UNIVERSITY
PO BOX 870801
TEMPE AZ 85287-0801

Immunization. Students born after December 31, 1956, are not permitted to register without proof of measles (rubeola) immunity or immunization given after January 1, 1980. See "Immunization Requirements," page 71.

Parking. A decal is required to park at ASU. For more information, call 480/965-6124, or write

PARKING SERVICES
ARIZONA STATE UNIVERSITY
PO BOX 870704
TEMPE AZ 85287-0704

Registration. Registration may be completed in person or by using SunDial. For more information, see the *Summer Sessions Bulletin*.

A maximum of seven semester hours in each five-week session or nine semester hours in the eight-week session may be taken. Hours of enrollment in any other institution or independent learning course are included in the maximum allowable course load during any given session.

Tuition and Fees. Summer sessions students pay for the actual number of semester hours enrolled, plus the Associated Students' Association fee, the Financial Aid Trust Fee, and the Student Recreation Complex fee. Students are also required to pay any special fees attached to specific classes. For more information, see the *Summer Sessions Bulletin*.

ASU Main Directory

For the "ASU East Directory," see page 665. For the "ASU West Directory," see page 680. For the "ASU Extended Campus Directory," see page 701.

Organization	Location	Telephone	Web Address
Academic Transfer Articulation Office	UASB 125B	480/965-8332	www.asu.edu/provost/articulation
Academic Transfer Programs	UASB 125B	480/965-2476	www.asu.edu/provost/articulation
Course Equivalency Guide	UASB 125B	480/965-9172	www.asu.edu/provost/articulation
General Studies Guides	UASB 125B	480/727-6599	www.asu.edu/provost/articulation
Transfer Guides	UASB 125B	480/727-6599	www.asu.edu/provost/articulation
Admissions	—	—	—
Graduate	WILSN 101	480/965-6113	www.asu.edu/graduate/admissions
Law	LAW 120	480/965-1474	www.law.asu.edu
Readmissions (undergraduate)	SSV 142	480/965-7550	www.asu.edu/registrar/readmissions
Undergraduate	SSV 112	480/965-7788	www.asu.edu/admissions
Adult Re-Entry	MU 14	480/965-2252	www.asu.edu/studentlife/reentry
Architecture and Environmental Design, College of	ARCH 134	480/965-8169	www.asu.edu/caed
Architecture, School of	AED 162	480/965-3536	www.asu.edu/caed/SOA
Design, School of	AED 154	480/965-4135	www.asu.edu/caed/SOD
Herberger Center for Design Excellence	ARCH 119	480/965-6693	www.asu.edu/caed/HUDE
Planning and Landscape Architecture, School of	AED 158	480/965-7167	www.asu.edu/caed/SPLA
Arizona Drug and Gang Prevention Resource Center	ASUDC Bldg. D	480/727-5015 1-888-432-2347	www.asu.edu/adgprc
Arizona Prevention Resource Center	ASUDC Bldg. D	480/727-2772 1-800-432-2772	www.azprevention.org
Associated Students of ASU (ASASU)	MU 310	480/965-3161	www.asu.edu/asasu
ASU Alumni Association	MAIN 200	480/965-2586 1-800-258-6687	www.asu.edu/alumni
ASU East (See "ASU East Directory," page 665.)	—	480/727-3278	www.east.asu.edu
ASU Extended Campus (See "ASU Extended Campus Directory," page 701.)	ASUDC C319	480/965-9696	www.asu.edu/xed
ASU Main	—	480/965-9011	www.asu.edu
ASU West (See "ASU West Directory," page 680.)	—	602/543-5500	www.west.asu.edu
ASU West Library	FLHLB	602/543-8500	www.west.asu.edu/library
Bookstore, ASU	BKSTR	480/965-7928	bookstore.asu.edu/index.php
Business, W. P. Carey School of	BA 109	480/965-4227	wpcarey.asu.edu
Accountancy, School of	BA 223	480/965-3631	wpcarey.asu.edu/acc
Business Administration (M.B.A.)	BA 160	480/965-3332	wpcarey.asu.edu/mba
Business Administration (Ph.D.)	BA 151	480/965-3368	wpcarey.asu.edu/grad/phd
Economics, Department of	BAC 659	480/965-3531	wpcarey.asu.edu/ecn
Finance, Department of	BAC 519	480/965-3131	wpcarey.asu.edu/fin
Health Administration and Policy, School of	BA 318	480/965-7778	wpcarey.asu.edu/hap
Information Systems, Department of	BA 223	480/965-3252	wpcarey.asu.edu/is
International Business Studies	BA 109	480/965-0596	wpcarey.asu.edu/up/ipo.cfm
Management, Department of	BA 323	480/965-3431	wpcarey.asu.edu/mgt
Marketing, Department of	BAC 460	480/965-3621	wpcarey.asu.edu/mkt
Supply Chain Management, Department of	BA 446	480/965-6044	wpcarey.asu.edu/scm

Organization	Location	Telephone	Web Address
Campus Dining at ASU	—	—	www.asucampusdining.com
Administrative Office	MU 138	480/965-2305	—
Distinctive Catering Sales Office	MU 182	480/965-6508	—
Meal Plan Sales	MU 189	480/965-3464	—
Career Services	SSV 329	480/965-2350	www.asu.edu/career
Cashiering Services	SSV 244	480/965-7468	fs.asu.edu/office/cashier.asp
Child and Family Services	MU 14C	480/965-9515	www.asu.edu/mu/family
Co-Curricular Programs	MCL 109	480/965-9600	www.asu.edu/partnerships
Community Service Program	MU 303	480/965-2255	www.asu.edu/mu/community
Counseling and Consultation	SSV 334	480/965-6146	www.asu.edu/counseling_center
	SHS A168	480/965-4726	—
Creative Writing (M.F.A.)	LL 307C	480/965-3528	www.asu.edu/clas/english/creativewriting
Danforth Chapel	CHAPL	480/965-3570	www.asu.edu/studentlife/danforth
Disability Resources for Students	MCENT	—	www.asu.edu/drs
TTY	—	480/965-9000	—
Voice	—	480/965-1234	—
Drop/add and withdrawal information	SSV 144	480/965-3124	—
Education, College of	EDB 108	480/965-3306	coe.asu.edu
Computer Support/Student Computer Lab	EDB 122	480/965-2126	coecs.asu.edu
Curriculum and Instruction, Division of	ED 426	480/965-1644	coe.asu.edu/programs.html
Curriculum and Instruction, Graduate Program Office	ED 434	480/965-4602	coe.asu.edu/programs.html
Dean's Office	EDB 104	480/965-3306	coe.asu.edu
Education Policy Studies Laboratory	EDB L1-01	480/965-1886	www.asu.edu/educ/eps1
Educational Leadership and Policy Studies, Division of	ED 120	480/965-6357	coe.asu.edu/programs
Educational Research and Services, Bureau of	ED 140	480/965-3538	bers.asu.edu
Indian Education, Center for	ED 402	480/965-6292	www.ed.asu.edu/cie
Psychology in Education, Division of	EDB 302	480/965-3384	coe.asu.edu/programs
Counselor Training Center	EDB 401	480/965-5067	coe.asu.edu/ctc
Psychology in Education Admissions Information (recording, voice mail)	—	480/965-6420	—
Southwest Center for Education Equity and Language Diversity	ED 440	480/965-7134	www.asu.edu/educ/sceed
Student Services, Office of			
Academic Advising	EDB L1-13	480/965-5555	coe.asu.edu/oss
Living and Learning Residential Floor	MANZH	480/965-9706	coe.asu.edu/oss
New Student Recruitment	EDB L1-12	480/965-5555	coe.asu.edu/oss
Professional Field Experiences	EDB L1-14	480/965-6255	coe.asu.edu/pfe
Vice President for University-School Partnerships	EDB 104	480/965-3306	coe.asu.edu
Educational Opportunity Center	1000 E. Apache No. 118	480/894-8451	www.asu.edu/studentlife/eoc
Engineering, Ira A. Fulton School of	—	480/965-1722	www.fulton.asu.edu
Bioengineering, Harrington Department of	ECG 334	480/965-3028	www.fulton.asu.edu/~bme
Chemical and Materials Engineering, Department of	ECG 202	480/965-3313	www.fulton.asu.edu/~cme
Civil and Environmental Engineering, Department of	ECG 252	480/965-3589	www.fulton.asu.edu/~civil
Computer Science and Engineering, Department of	BYENG	480/965-3190	cse.asu.edu
Construction, Del E. Webb School of	USE 138	480/965-3615	construction.asu.edu
Electrical Engineering, Department of	ENGRC 552	480/965-3424	www.fulton.asu.edu/ee
Industrial Engineering, Department of	GWC 502	480/965-3185	www.fulton.asu.edu/~imse

ASU MAIN DIRECTORY

Organization	Location	Telephone	Web Address
Engineering, Ira A. Fulton School of (continued)			
Mechanical and Aerospace Engineering, Department of	ECG 346	480/965-3291	www.fulton.asu.edu/~mae
Equal Opportunity/ Affirmative Action TTY	ADM B171 —	480/965-5057 480/965-0471	www.eoaa.asu.edu —
Exercise Science (Ph.D.)	PEBW M201	480/965-7906	www.asu.edu/clas/espe
Extended Education, College of (See "ASU Extended Campus Directory," page 701.)	ASUDC C319	480/965-9696	www.asu.edu/xed
Fine Arts Box Office	FAC	480/965-6447	—
Fine Arts, Katherine K. Herberger College of	GHALL 132	480/965-6536	herbergercollege.asu.edu
Art, School of	ART 102	480/965-3468	herbergercollege.asu.edu/art
Dance, Department of	PEBE 107A	480/965-5029	herbergercollege.asu.edu/dance
Music, School of	MUSIC E185	480/965-3371	music.asu.edu/home.html
Theatre, Department of	GHALL 232	480/965-5337	herbergercollege.asu.edu/theatre
Freshman Year Experience	PVW	480/965-1512	www.asu.edu/fye
Gerontology Program	FAB S121	602/543-6642	www.west.asu.edu/chs/grn
Graduate College	WILSN lobby	480/965-3521	www.asu.edu/graduate
Admissions	WILSN 101	480/965-6113	www.asu.edu/graduate/admissions
Advising/Referral Office	WILSN lobby	480/965-3521	www.asu.edu/graduate
Financial Assistance	WILSN lobby	480/965-3521	www.asu.edu/graduate/financial
Format Office	WILSN lobby	480/965-3521	www.asu.edu/graduate/format
Graduation Section	SSV 140	480/965-6980	www.asu.edu/registrar/graduation
Commencement Office	ADM B167	480/965-6611	www.asu.edu/ssc/commence
Graduate Division	SSV 140	480/965-6980	—
Undergraduate Division	SSV 140	480/965-3256	—
Greek Life (Fraternities and Sororities)	MU 305	480/965-2255	www.asu.edu/mu/greeklife
Honors College, Barrett	IRISH A121	480/965-2359	www.asu.edu/honors
Human Resources Customer Service Center	USB	480/965-2701	www.asu.edu/hr
Information Technology			www.asu.edu/it
Classroom Support Centers	CPCOM 105	480/965-3342	www.asu.edu/classroomsupport
Computer Accounts Office	CPCOM 202	480/965-1211	www.asu.edu/computeraccounts
Computing Site hours	—	480/965-6500	www.asu.edu/siteschedules
Computing Sites	CPCOM Atrium	480/965-4459	www.asu.edu/it/fyi/sites
	BAC 16	480/965-3074	—
	ECG 150	480/965-6280	—
	GWC 185	480/965-4307	—
Customer Assistance Center	CPCOM 202	480/965-5939	www.asu.edu/cacenter
Geographic Information Services	—	480/965-4007	www.asu.edu/gis
Help Desk	CPCOM 202	480/965-6500	www.asu.edu/helpdesk
Instruction Support Lab	CPCOM 213	480/965-6739	is.asu.edu/islab
Intergroup Relations Center	SSV 278	480/965-1574	www.asu.edu/provost/intergroup
International Programs Office	TMPCT 198	480/965-5965	ipo.asu.edu
International Student Office	SSV 265	480/965-7451	www.asu.edu/studentlife/iso
International Undergraduate Admissions	SSV 101	480/965-2688	www.asu.edu/admissions/international
Justice Studies (Ph.D.)	WILSN 316	480/965-7682	www.asu.edu/copp/justice
Law, College of	LAW 101	480/965-6181	www.law.asu.edu
Admissions Office	LAW 120	480/965-1474	—
John J. Ross–William C. Blakley Law Library	LAWLB	480/965-6144	www.lawlib.asu.edu
Learning Resource Center	MU 14 PVW	480/965-7728 480/965-6254	www.asu.edu/lrc

Organization	Location	Telephone	Web Address
Liberal Arts and Sciences, College of	SS 111	480/965-6506	www.asu.edu/clas
Aerospace Studies, Department of	PSYN 324	480/965-3181	www.asu.edu/clas/afrotc
African American Studies Program	COWDN 227	480/965-4399	www.asu.edu/clas/aftramstu
Anthropology, Department of	ANTH 233	480/965-6213	www.asu.edu/clas/anthropology
Chemistry and Biochemistry, Department of	PS D102	480/965-3461	www.asu.edu/clas/chemistry
Chicana and Chicano Studies, Department of	COOR 6633	480/965-5091	www.asu.edu/clas/chicana
Computational Biosciences Program	PSA 216	480/965-5519	www.asu.edu/compbiosci
English, Department of	LL 542	480/965-3168	www.asu.edu/clas/english
Family and Human Development, Department of	COWDN 106	480/965-6978	www.asu.edu/clas/frhd
Geography, Department of	SCOB 330	480/965-7533	geography.asu.edu
Geological Sciences, Department of	PS F686	480/965-5081	geology.asu.edu
History, Department of	COOR 4595	480/965-5778	www.asu.edu/clas/history
Interdisciplinary Humanities Program	LL 641	480/965-6747	www.asu.edu/clas/humanities
Kinesiology, Department of	PEBW 218	480/965-3875	www.asu.edu/clas/kines
Languages and Literatures, Department of	LL 440	480/965-6281	www.asu.edu/languages/
Life Sciences, School of	LSE 207	—	—
Graduate Programs	LSE 229	480/965-1768	sols.asu.edu/grad/gdegrees.htm
Research and Training Initiatives	LSE 205	480/965-2543	sols.asu.edu/rti
Student Services/advising	LSC 206	480/727-6277	sols.asu.edu/advising/ugrad/uadvising.htm
Undergraduate Programs	LSC 226	480/965-9537	sols.asu.edu/ugrad/udegrees.htm
Mathematics and Statistics, Department of	PS A216	480/965-3951	math.la.asu.edu
Military Science, Department of	SS 330	480/965-3318	www.asu.edu/clas/military
Philosophy, Department of	COOR 3307	480/965-3394	www.asu.edu/clas/philosophy
Physics and Astronomy, Department of	PS F470	480/965-3561	phy.asu.edu
Political Science, Department of	COOR 6801	480/965-6551	www.asu.edu/clas/polisci
Psychology, Department of	PSY 237	480/965-3326	psych.la.asu.edu
Religious Studies, Department of	ECA 377	480/965-7145	www.asu.edu/clas/religious_studies
Sociology, Department of	COOR 5681	480/965-3546	www.asu.edu/clas/sociology
Speech and Hearing Science, Department of	COOR 2211	480/965-2374	www.asu.edu/clas/shs
Women's Studies Program	ECA 209	480/965-2358	www.asu.edu/clas/womens_studies
Libraries			
John J. Ross–William C. Blakley Law Library	LAWLB	480/965-6144	www.lawlib.asu.edu
University Libraries	LIB	480/965-6164	www.asu.edu/libraries
Architecture and Environmental Design Library	AED 153	480/965-6400	www.asu.edu/caed/RESOURCES/ AEDLIBRARY/html/AEDLibrary.htm
Archives and Manuscripts, Department of	LIB 413	480/965-3145	www.asu.edu/lib/archives
Hayden Library (Circulation Desk)	LIB	480/965-3605	www.asu.edu/lib/hayden
Library Administration	LIB	480/965-3417	—
Music Library	MUSIC W302	480/965-3513	www.asu.edu/lib/music
Noble Science and Engineering Library	NOBLE	480/965-7607	www.asu.edu/lib/noble
Reference questions	—	480/965-4932	www.asu.edu/lib/hayden/ref
Memorial Union	MU	—	www.asu.edu/mu
Administrative offices	MU mezzanine	480/965-5310	—
Event and Meeting Services	MU 182	480/965-3406	—
Information Desk	MU first level	480/965-5728	—
Lost and Found	MU first level	480/965-5728	—
Montgomery Computer Lab and Work Room	MU 178	480/727-6663	—
Sparky's Den	MU lower level	480/965-3646	—
Sun Devil Involvement Center	MU third level	480/965-2255	www.asu.edu/mu/sdic
Multicultural Student Center	SSV 394	480/965-6060	www.asu.edu/studentlife/msc

ASU MAIN DIRECTORY

Organization	Location	Telephone	Web Address
Nursing, College of	NUR 344	480/965-3244	nursing.asu.edu
Community Health Services Clinic	—	480/941-9283	nursing.asu.edu/chs/index.htm
Continuing and Extended Education	CSB 334	480/965-7431	nursing.asu.edu/ce
Graduate program	NUR 444	480/965-3948	nursing.asu.edu/programs/graduate
Student Services Office	NUR 108	480/965-2987	nursing.asu.edu/studentsservices
Operator, University	—	480/965-9011	—
Orientation and Parent Programs	SSV 110	480/965-2880	www.asu.edu/admissions/ newstudentprograms
Parents Association (programs)	SSV 110	480/965-7625	—
Parking and Transit Services	University Towers	480/965-6406	www.asu.edu/dps/pts
Public Programs, College of	WILSN 234	480/965-1034	www.asu.edu/copp
Advanced Public Executive Program	ASUDC C110	480/965-4006	spa.asu.edu/apep
American Humanics Program	AG 213	480/965-5726	www.asu.edu/copp/recreation/emphasis/ah
American Indian Studies Program	AG 372	480/965-3634	www.asu.edu/copp/americanindian
Asian Pacific American Studies Program	AG 352	480/965-9711	www.asu.edu/copp/asianamerican
Human Communication, Hugh Downs School of	STAUF A412	480/965-5095	com.pp.asu.edu
Journalism and Mass Communication, Walter Cronkite School of	STAUF A231	480/965-5011	www.asu.edu/cronkite
Justice Studies, School of	WILSN 331	480/965-7682	www.asu.edu/copp/justice
Morrison Institute for Public Policy	UVCMN 203	480/965-4525	www.asu.edu/copp/morrison
Nonprofit Leadership and Management, Center for	AG 356	480/965-0607	www.asu.edu/copp/nonprofit
Public Affairs, School of	WILSN 208	480/965-3926	spa.asu.edu
Recreation Management and Tourism, Department of	MOEUR 134	480/965-7291	www.asu.edu/copp/recreation
Social Work, School of	WHALL 135	480/965-3304	sww.asu.edu
Urban Inquiry, Center for	AG 320	480/965-9216	www.asu.edu/copp/urban
Readmissions (undergraduate)	SSV 142	480/965-7550	www.asu.edu/registrar/readmissions
Registrar	SSV 144	—	www.asu.edu/registrar
General information (recorded)	—	480/965-4747	—
TTY	—	480/965-3236	—
Voice	—	480/965-3124	—
Residency Classification	SSV 146	480/965-7712	www.asu.edu/registrar/residency
Residential Life	SSV 170	480/965-3515	www.asu.edu/reslife
Science and Engineering of Materials (Ph.D.)	PSA 323	480/965-2460	www.asu.edu/graduate/SEM
Speech and Hearing Science (Ph.D.)	CSB 146	480/965-9396	www.asu.edu/clas/shs
Statistics (M.S.)	BAC 570	480/965-2671	www.asu.edu/graduate/statistics
Student Accounts	SSV 230	480/965-6341	www.asu.edu/sbs
Student Advocacy and Assistance	SSV 263	480/965-6547	www.asu.edu/studentlife/advocacy
Student Business Services	ADM A105	480/965-6301	www.asu.edu/sbs
Student Development and Memorial Union	MU mezzanine	480/965-5310	www.asu.edu/mu
Student Employment	SSV 202	—	www.asu.edu/fa/studemp
Off-Campus	—	480/965-6318	—
On-Campus	—	480/965-5186	—
Student Financial Assistance	SSV 216A	480/965-3355	www.asu.edu/fa
Student Health and Wellness Center	SHS	480/965-3346	www.asu.edu/health
Appointments	—	480/965-3349	—
Fax	—	480/965-8914	—
Insurance	—	480/965-2411	—
Measles Information	—	480/965-1358	—
Student ID (Sun Card)	MU 190	480/965-2273	www.suncard1.com
Student Judicial Affairs	SSV 263	480/965-6547	www.asu.edu/studentlife/judicial
Student Leadership Programs	MU 340	480/965-2255	www.asu.edu/mu/slp

Organization	Location	Telephone	Web Address
Student Legal Assistance	MU 329	480/965-6307	www.asu.edu/studentlife/legal
Student Life	SSV 263	480/965-6547	www.asu.edu/studentlife
Student Media	MCENT 2	480/965-7572	www.statepress.com
<i>State Press</i> Advertising	—	480/965-6555	www.statepress.com
<i>State Press</i> Information	—	480/965-7572	—
<i>State Press</i> Newsroom	—	480/965-2292	—
Web Devil	—	480/727-6941	www.asuwebdevil.com
Student Organization Resource Center	MU 340	480/965-2255	www.asu.edu/clubs
Student Recreation Complex and Recreational Sports	SRC 220	480/965-8900	www.asu.edu/src
Summer Sessions/University Ceremonies	RITT B160	480/965-6611	www.asu.edu/summer
	—	480/965-6611	www.asu.edu/ssc/StudyAbroad
SunDial	—	480/350-1500	www.asu.edu/registrar/registration/ intouch.html
Testing Support Services	SSV 382	480/965-6777	www.asu.edu/vpsa/tss
Tickets	—	—	—
Athletic Events, Intercollegiate (Sun Devil Ticket Office)	—	480/965-2381	—
Gammage Auditorium Box Office	GGMA	480/965-3434	—
Public Events Administrative Offices	—	480/965-5062	—
Transcripts (outgoing)	SSV 140B	480/965-7276	www.asu.edu/registrar/transcripts
Transportation Systems (certificate)	ARCH 119	480/965-6395	www.asu.edu/caed/transportation
Tuition Payment Office	SSV 230	480/965-4347	www.asu.edu/sbs
Undergraduate Academic Services, Division of	UASB	480/965-3097	www.asu.edu/duas
Academic Advising Services	UASB 129	480/965-4464	www.asu.edu/duas/cas
Academic Community Engagement Services	UASB 156	480/727-6382	www.asu.edu/duas/aces
Academic Success at the University (Student Success Center) (UNI 100 and 101)	UASB 129	480/965-0259	www.asu.edu/duas/uni100
America Reads/America Counts	UASB 156	480/727-8092	www.asu.edu/duas/aces
Bachelor of Interdisciplinary Studies (B.I.S.)	UASB 203	480/965-1970	www.asu.edu/duas/bis
Campus Match	UASB 129	480/965-0259	www.asu.edu/duas/campmat
Declaration of Graduation	—	—	www.asu.edu/registrar/forms/pos.html
Degree Audit Reporting System (DARS)	UASB 100	480/965-0859	www.asu.edu/duas/dars
General Studies Program	UASB 142	480/965-0739	www.asu.edu/duas/genstudies
Service Learning Program	UASB 156	480/965-8092	www.asu.edu/duas/servicelearning
Summer Bridge	UASB 129	480/965-0259	www.asu.edu/duas/bridge
Writing Across the Curriculum Support and Development	UASB 129	480/965-0259	www.asu.edu/duas/wac
Writing Center	LL 340	480/965-4272	www.asu.edu/duas/wcenter
University Evaluation, Office of	AG 281	480/965-9291	www.asu.edu/oue
University Libraries (See "Libraries," page 521.)	—	—	—
University Testing Services	EDB 301	480/965-7146	www.asu.edu/uts
Upward Bound	SSV 276	480/965-6483	www.asu.edu/studentlife/ub
Veterans Services section	SSV 148	480/965-7723	www.asu.edu/registrar/veterans
Veterans Upward Bound	1000 E. Apache No. 106	480/965-3944	www.asu.edu/studentlife/vub
Winter Session (See "ASU Extended Campus Directory," page 701.)	RITT B132	480/727-9900	www.asu.edu/xed/winter

Regents' Professors

The title "regents' professor" is conferred on selected members of the ASU tenured faculty who have achieved and are sustaining the highest level of distinction by their exceptional contributions to the mission of the university in research or other creative activity and in teaching or professional service.

JOHN ALCOCK

Life Sciences

DAVID L. ALTHEIDE

Justice Studies

C. AUSTEN ANGELL

Chemistry and Biochemistry

CHARLES J. ARNTZEN

Life Sciences

CONSTANTINE A. BALANIS

Electrical Engineering

DAVID C. BERLINER

*Educational Leadership and Policy Studies
and Psychology in Education*

PETER R. BUSECK

Chemistry and Biochemistry and Geological Sciences

RON CARLSON

English

PHILLIP R. CHRISTENSEN

Geological Sciences

ROBERT B. CIALDINI

Psychology

GEOFFREY A. CLARK

Anthropology

JOHN M. COWLEY

Physics and Astronomy, Emeritus

NORMAN DUBIE

English

NANCY H. EISENBERG

Psychology

LEROY EYRING

Chemistry and Biochemistry, Emeritus

DAVID K. FERRY

Electrical Engineering

DAVID WILLIAM FOSTER

Languages and Literatures

GENE V GLASS

*Educational Leadership and Policy Studies
and Psychology in Education*

LUIS R. GOMEZ-MEJIA

Management

WILLIAM L. GRAF

Geography, Emeritus

RONALD GREELEY

Geological Sciences

GERALD THOMAS HEYDT

Electrical Engineering

DAVID R. HICKMAN

Music

PETER IVERSON

History

DAVID H. KAYE

Law

GARY D. KELLER

Languages and Literatures

REGENTS' PROFESSORS

MARK C. KLETT

Art

RAYMOND W. KULHAVY

Psychology in Education, Emeritus

DANIEL M. LANDERS

Kinesiology

SHENG H. LIN

Chemistry and Biochemistry, Emeritus

JANE MAIENSCHIN

Biology and Society

JAMES W. MAYER

*Chemical and Materials Engineering and Solid State
Science*

CARLETON B. MOORE

*Chemistry and Biochemistry and Geological
Sciences, Emeritus*

JEFFRIE G. MURPHY

Law and Philosophy

MICHAEL O'KEEFFE

Chemistry and Biochemistry, Emeritus

CAIO PAGANO

Music

DENNIS J. PALUMBO

Justice Studies, Emeritus

G. ROBERT PETTIT

Chemistry and Biochemistry

STEPHEN J. PYNE

Life Sciences

ALBERTO ALVARO RÍOS

English

NANCY FELIPE RUSSO

Psychology

IRWIN N. SANDLER

Psychology

DAVID J. SMITH

Physics and Astronomy and Solid State Science

MARY LEE SMITH

*Educational Leadership and Policy Studies
and Psychology in Education*

JOHN C.H. SPENCE

Physics and Astronomy

SUMNER G. STARRFIELD

Physics and Astronomy

MARY BETH STEARNS

Physics and Astronomy, Emerita

CHRISTY G. TURNER II

Anthropology, Emeritus

J. BRUCE WAGNER JR.

*Chemistry and Biochemistry and Solid State
Science, Emeritus*

KURT WEISER

Art

ASU Main Faculty and Academic Professionals

The faculty and academic professionals listed are involved in undergraduate and graduate instruction and research. The year of first appointment follows the name. Emeritae and emeriti are included.

A

Aannestad, Per (1975), Professor Emeritus of Physics and Astronomy; B.S., University of Oslo (Norway); Ph.D., University of California, Berkeley

Abbas, James J. (2002), Associate Professor of Bioengineering; Sc.B., Brown University; M.S., Ph.D., Case Western Reserve University

Abbaszadegan, Morteza (1999), Associate Professor of Civil and Environmental Engineering and Adjunct Professor of Life Sciences; B.S., University of Montana; M.S., Northern Arizona University; Ph.D., University of Arizona

Abele, Deborah (1990), Faculty Associate of Planning and Landscape Architecture; B.A., Vassar College

Aberle, James T. (1989), Associate Professor of Electrical Engineering; B.S., M.S., Polytechnic Institute of New York; Ph.D., University of Massachusetts, Boston

Abramson, Jay (1999), Senior Lecturer of Mathematics and Statistics; B.S., University of New Mexico; M.S., University of New Hampshire

Abston, Deborah (1990), Associate Librarian, Hayden Reference Services; B.S., M.S.L.S., Wayne State University

Abreu, José M. (2003), Associate Professor of Psychology in Education; B.A., M.Ed., Ph.D., University of California, Santa Barbara

Acereda, Alberto (1998), Associate Professor of Latin American Literature; Licenciado, University of Barcelona (Spain); M.A., Ph.D., University of Georgia

Acevedo, Roberto M. (1964), Professor Emeritus of Spanish; B.A., University of California, Berkeley; M.A., Ph.D., University of Arizona

Acharya, Raghunath (1976), Professor Emeritus of Physics and Astronomy; B.Sc., M.Sc., University of Delhi (India); Ph.D., University of Rochester

Acker, Barbara (1991), Associate Professor of Theatre; B.F.A., University of Texas, Austin; M.A., Case Western Reserve University; Ph.D., Wayne State University

Acker, William J. (1970), Professor Emeritus of Geography; B.S., Purdue University; M.S., University of Kansas; M.A., Ph.D., Syracuse University

Adams, Donna (1983), Professor Emerita of Nursing; B.S.N., University of Missouri, Columbia; M.S., Arizona State University; D.N.Sc., University of San Diego

Adams, James B. (1996), Professor of Materials Engineering; Codirector, Science and Engineering of Materials; B.S., Duke University; M.S., Ph.D., University of Wisconsin, Madison

Adams, Karen L. (1984), Professor of English; Director, Program for Southeast Asian Studies; B.A., M.A., Ph.D., University of Michigan

Adams, Sue (2001), Clinical Associate Professor of Nursing; B.S.N., University of Arizona; M.S., Arizona State University

Adelman, Madelaine (1998), Assistant Professor of Justice Studies; A.B., Ph.D., Duke University

Adelson, Roger D. (1974), Professor of History; B.A., George Washington University; B.Litt., University of Oxford (United Kingdom); M.A., Ph.D., Washington University

Aerni, Wayne (1991), Faculty Associate of Public Affairs; B.A., University of Oregon; M.P.A., Ph.D., Arizona State University

Agadjanian, Victor (1995), Associate Professor of Sociology; B.A., Moscow State University (Russia); M.S., Ph.D., University of Southern California

Aguilar, John L. (1976), Professor Emeritus of Anthropology; B.A., University of California, Los Angeles; M.A., California State University, Los Angeles; Ph.D., University of California, San Diego

Ahn, Seung C. (1990), Associate Professor of Economics; B.A., Sogang University (South Korea); M.A., Ph.D., Michigan State University

Ahrendt, Laurie (2000), Faculty Associate of Nursing; B.S.N., M.S., Arizona State University

Aiken, Leona S. (1985), Professor of Psychology; B.S., Virginia Commonwealth University; M.S., Ph.D., Purdue University

Akins, William H. (1975), Professor Emeritus of Theatre; B.A., Duke University; M.A., Ph.D., University of Denver

Alarcon, Ricardo O. (1989), Professor of Physics and Astronomy; B.S., M.S., University of Chile; Ph.D., Ohio University

Alberts, Jess K. (1989), Professor of Communication; Director, Hugh Downs School of Human Communication; B.S.Ed., M.A., Abilene Christian University; Ph.D., University of Texas, Austin



Alcock, John

(1972)

Regents' Professor of Life Sciences; B.A., Amherst College; Ph.D., Harvard University

Alcorn, Marianne (1981), Law Librarian, Reference; B.A., University of Washington; M.L.S., University of Southern California

Aldama, Arturo (1996), Associate Professor of Chicana and Chicano Studies; B.A., Evergreen State University; M.A., Ph.D., University of California, Berkeley

Aldrich, Frank T. (1969), Professor Emeritus of Geography; B.A., University of Texas, Austin; M.S., Ph.D., Oregon State University

Alexander, Gene (2003), Associate Professor of Psychology; B.A., Pomona College; M.A., Ph.D., Loyola University Chicago

Alexander, Robert J. (1975), Professor of German; B.A., Macalester College; M.A., Ph.D., University of Wisconsin, Madison

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Alford, Terry L. (1993), Professor of Materials Engineering; B.S., M.S., North Carolina State University, Raleigh; Ph.D., Cornell University

Alisky, Marvin (1957), Professor Emeritus of Political Science; B.A., M.A., Ph.D., University of Texas, Austin

Allee, David R. (1991), Associate Professor of Electrical Engineering; B.S., University of Cincinnati; M.S., Ph.D., Stanford University

Allen, Craig M. (1991), Associate Professor of Journalism and Mass Communication; B.A., Linfield College; M.S., University of Oregon; Ph.D., Ohio University

Allen, James P. (1989), Professor of Chemistry and Biochemistry; B.S., Saint Joseph's University; M.S., Ph.D., University of Illinois

Allen, Jonathan (2001), Assistant Professor of Chemical Engineering and Civil and Environmental Engineering; B.S., University of Pennsylvania; M.S., Sc.D., Massachusetts Institute of Technology

Allison, Maria T. (1984), Professor of Recreation Management and Tourism; Interim Dean, Graduate College; B.S., M.S., University of New Mexico; Ph.D., University of Illinois

Alozie, Nicholas O. (1991), Professor of Public Affairs; B.A., M.P.A., Texas Southern University; M.A., Ph.D., University of Texas, Dallas

Alpers, Rojann (1995), Associate Professor of Nursing; Chair, Division of Community Health/Psychosocial Nursing Systems; B.S.N., M.S., Arizona State University; Ph.D., University of Iowa

Alquist, Lewis R. (1984), Professor of Art; B.F.A., Florida Atlantic University; M.F.A., Cranbrook Academy of Art



Altheide, David L.
(1973)

Regents' Professor of Justice Studies; B.A., Central Washington State College; M.A., University of Washington; Ph.D., University of California, San Diego

Alvarado, Ronald H. (1974), Professor Emeritus of Life Sciences; Dean Emeritus, College of Extended Education; B.A., University of California, Riverside; M.S., Ph.D., Washington State University

Amann, Nancy (2001), Lecturer of Speech and Hearing Science; B.A., M.S., Gallaudet University

Amazeen, Eric P. (1999), Assistant Professor of Psychology; B.A., Franklin and Marshall College; M.A., Ph.D., University of Connecticut

Amazeen, Polemnia G. (1999), Assistant Professor of Psychology; B.A., Franklin and Marshall College; M.A., Ph.D., University of Connecticut

Ames, James G. (1985), Senior Research Associate, Institute for Manufacturing Enterprise Systems; B.S., San Diego State University

Anbar, Ariel (2003), Associate Professor of Geological Sciences; A.B., Harvard University; M.S., Ph.D., California Institute of Technology

Anderies, J. Marty (2002), Assistant Professor of Life Sciences; B.S., Colorado School of Mines; M.S., Ph.D., University of British Columbia (Canada)

Anderson, Gary (1975), Professor Emeritus of Curriculum and Instruction; B.S., M.Ed., Edinboro State College; Ph.D., University of Pittsburgh

Anderson, James R. (1984), Senior Research Scientist, Mechanical and Aerospace Engineering; B.A., Williams College; Ph.D., California Institute of Technology

Anderson, Lisa M. (2000), Assistant Professor of Women's Studies; A.B., Mount Holyoke College; M.A., Smith College; Ph.D., University of Washington

Anderson, Marcia L. (1986), Librarian, Collection Development; B.A., University of Michigan; M.L.S., Wayne State University

Anderson, Melvin S. (1967), Professor Emeritus of Finance; B.S., M.S., Oklahoma State University; Ed.D., University of Arkansas

Anderson-Rowland, Mary R. (1974), Associate Professor of Industrial Engineering; Associate Dean, Student Affairs, Ira A. Fulton School of Engineering; B.A., Hope College; M.S., Ph.D., University of Iowa

Andress, Barbara L. (1972), Professor Emerita of Music; B.A., M.A., Arizona State University



Angell, C. Austen
(1989)

Regents' Professor of Chemistry and Biochemistry; B.S., M.S., Melbourne University (Australia); Ph.D., University of London (United Kingdom)

Anijar, Karen Z. (1998), Associate Professor of Curriculum and Instruction; B.A., Florida State University; M.A., Ph.D., University of North Carolina, Greensboro

Appleton, Nicholas R. (1972), Professor of Curriculum and Instruction and Educational Leadership and Policy Studies; Academic Program Coordinator, Social and Philosophical Foundations; B.A., San Francisco State University; M.A., California State University, Northridge; Ed.D., University of Massachusetts, Amherst

Aranda, Luis (1975), Professor Emeritus of Legal and Ethical Studies; B.M., M.Ed., University of Arizona; J.D., Arizona State University

Arce, Leslie (2001), Lecturer of Mathematics and Statistics; B.S., Kansas State University; M.A., Arizona State University

Arciniega, G. Miguel (1979), Associate Professor of Counselor Education; B.S., M.A., New Mexico State University; Ph.D., University of Arizona

Ariaratnam, Samuel (2001), Associate Professor of Construction; B.A.Sc., University of Waterloo (Canada); M.S., Ph.D., University of Illinois, Urbana-Champaign

Arias, M. Beatriz (1989), Associate Professor of Curriculum and Instruction; B.A., M.A., Occidental College; Ph.D., Stanford University

Armbruster, Charlotte (1997), Clinical Associate Professor of Nursing; B.S.N., M.S., Arizona State University

Armbruster, Dieter (1989), Professor of Mathematics and Statistics; Abitur, Zeppelin, Gymnasium (Germany); Diplom, Ph.D., University of Tübingen (Germany)

Armendt, Brad (1989), Associate Professor of Life Sciences and Philosophy; B.A., Rice University; Ph.D., University of Illinois, Chicago

Arner, Douglas G. (1959), Professor Emeritus of Philosophy; B.S., Creighton University; M.A., Ph.D., University of Michigan

Arnold, William E. (1973), Professor of Communication; Director, Gerontology Program; B.S., M.A., Northern Illinois University; Ph.D., Pennsylvania State University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS



Arntzen, Charles J.
(2000)

Regents' Professor of Life Sciences; Florence Ely Nelson Presidential Chair; Director, Center for Infectious Diseases and Vaccinology, Arizona Biodesign Institute at Arizona State University; B.S., M.S., University of Minnesota; Ph.D., Purdue University

Aronson, Jerome M. (1966), Professor Emeritus of Life Sciences; B.A., Ph.D., University of California, Berkeley

Arredondo, Patricia (1999), Associate Professor of Psychology in Education and Women Studies; Academic Program Leader, Counsel of Education and Counseling Psychology; B.S., Kent State University; Ed.M., Boston College; Ed.D., Boston University

Arreola, Daniel (1990), Professor of Geography; B.A., University of California, Los Angeles; M.A., California State University, Hayward; Ph.D., University of California, Los Angeles

Arrowsmith, J. Ramon (1995), Associate Professor of Geological Sciences; B.A., Whittier College; Ph.D., Stanford University

Arterian, Hannah R. (1979), Professor Emerita of Law; B.A., Elmira College; J.D., University of Iowa

Arzubiaga, Angela (2004), Assistant Professor of Psychology in Education; B.A., Hamline University; Ph.D., University of California, Los Angeles

Ashbrook, Mark (2000), Lecturer of Mathematics and Statistics; B.S., M.S., University of Illinois; M.A., University of Kansas

Ashcraft, Robert F. (1995), Associate Professor of Recreation Management and Tourism; Director, Center for Nonprofit Leadership and Management; B.A., University of Arizona; M.A., Northern Arizona University; Ph.D., Arizona State University

Ashford, Jose B. (1984), Professor of Social Work; B.A., Loyola University, New Orleans; M.S.W., Ohio State University; Ph.D., Bowling Green State University

Ashforth, Blake (1996), Jerry and Mary Ann Chapman Professorship in Business; B.Comm., Ph.D., University of Toronto (Canada)

Ashley, Richard (1981), Associate Professor of Political Science; B.A., University of California, Santa Barbara; M.A., Ph.D., Massachusetts Institute of Technology

Askland, Andrew (1999), Director, Center for the Study of Law, Science, and Technology; A.B., Holy Cross College; B.S., University of Maryland; M.A., University of Colorado; J.D., University of Maryland; Ph.D., University of Colorado

Atkinson, Laura (2002), Lecturer of Curriculum and Instruction; B.A., Saint Edward's University; M.S., University of Wisconsin, Madison

Atkinson, Robert K. (2002), Assistant Professor of Psychology in Education; B.A., California State University, Chico; M.S., Ph.D., University of Wisconsin, Madison

Atsumi, Takayori P. (1968), Professor Emeritus of Music; B.F.A., Kunitachi Music College (Japan); M.M., New England Conservatory of Music

Augsburg, Tanya (1997), Senior Lecturer of Interdisciplinary Studies; B.A., New York University; M.A., Ph.D., Emory University

Aulerich, Christopher E. (1989), Faculty Associate, Del E. Webb School of Construction

Axelrod, Morris (1972), Professor Emeritus of Sociology; B.A., Ph.D., University of Michigan

Ayyanar, Raja (2000), Assistant Professor of Electrical Engineering; B.E., P.S.G. College of Technology (India); M.S., Indian Institute of Science (India); Ph.D., University of Minnesota

Azuma, Tamiko (1998), Assistant Professor of Speech and Hearing Science; B.A., University of California, Santa Cruz; M.A., Ph.D., Arizona State University

B

Bacchus, Denise N.A. (2003), Visiting Assistant Professor of Social Work; B.A., Ithaca College; M.A., Ph.D., State University of New York, Albany

Backus, Charles E. (1968), Professor of Electrical Engineering; Provost, ASU East; Vice President, ASU; B.S.M.E., Ohio University; M.S., Ph.D., University of Arizona

Bacon, Catherine K. (1990), Clinical Associate Professor of Speech and Hearing Science; B.A., University of California, Santa Barbara; M.A., University of Minnesota

Bacon, Sid P. (1988), Professor of Speech and Hearing Science; B.G.S., M.A., University of Kansas; Ph.D., University of Minnesota, Twin Cities

Bacon, Thomas (1993), Professor Emeritus of Music; B.S., Oakland University

Badger, William W. (1985), Professor of Construction; Director, Del E. Webb School of Construction; B.S.M.E., Auburn University; M.S.C.E., Oklahoma State University; Ph.D., Iowa State University

Baek, Jae-Meen (2001), Assistant Professor of Curriculum and Instruction; B.S., Ewha Women's University (South Korea); M.S., Ph.D., University of Wisconsin, Madison

Baer, Steven M. (1988), Associate Professor of Mathematics and Statistics; B.S., M.S., Ph.D., University of Illinois

Bagwell, Marilyn (1972), Professor Emerita of Nursing; B.S.N., University of California, Los Angeles; M.A., Arizona State University; Ph.D., Texas Woman's University

Bahr, Donald M. (1967), Professor Emeritus of Anthropology; A.B., M.A., Ph.D., Harvard University

Baier, Leslie (1995), Adjunct Professor of Life Sciences; B.A., Lawrence University; Ph.D., University of Michigan

Bailey, James E. (1974), Professor Emeritus of Industrial Engineering; B.S.I.E., M.S.I.E., Ph.D., Wayne State University

Bailey, Wayne A. (2000), Professor of Music; Director, School of Music; B.M.E., Iowa State University; M.M., University of Michigan; D.M.A., University of Colorado

Baker, Aaron (1992), Associate Professor of Interdisciplinary Humanities; B.A., Hobart College; M.A., Ph.D., Indiana University

Baker, Brenda J. (1998), Associate Professor of Anthropology; B.A., Northwestern University; M.A., Ph.D., University of Massachusetts, Amherst

Baker, Dale R. (1989), Professor of Curriculum and Instruction; B.A., University of Oklahoma; M.A.T., Trenton State College; Ed.D., Rutgers, The State University of New Jersey

Baker, Marc A. (1988), Adjunct Professor of Life Sciences; B.A., San Jose State University; M.A., Humboldt State University; Ph.D., Arizona State University

Baker, Virgil R. (1966), Professor Emeritus of Geography; B.S., M.S., University of Nebraska; Ph.D., University of Utah

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS



Balanis, Constantine A.
(1983)

Regents' Professor of Electrical Engineering; B.S.E.E., Virginia Polytechnic Institute and State University; M.E.E., University of Virginia; Ph.D., Ohio State University

- Balasubramanian, Krishnan** (1980). Professor Emeritus of Chemistry; M.Sc., Birla Institute of Technology Science, India; M.A., Ph.D., Johns Hopkins University
- Baldini, Pier Raimondo** (1978). Professor of Italian; B.A., San Francisco State University; M.A., University of British Columbia (Canada); Ph.D., University of California, Los Angeles
- Baldwin, Marjorie L.** (2002). Professor of Health Administration and Policy; B.S., State University College, Oswego; M.A., Ph.D., Syracuse University
- Ball, Terence** (1998). Professor of Political Science; B.A., University of California, Santa Cruz; M.A., Ph.D., University of California, Berkeley
- Balling, Robert C.** (1987). Professor of Geography; Director, of Climatology Laboratory; A.B., Wittenberg University; M.A., Bowling Green State University; Ph.D., University of Oklahoma
- Ballon-Aguirre, Enrique** (1992). Professor of Spanish; Bachiller en Letras, Bachiller en Derecho, University of Arequipa (Peru); Doctor en Literatura, National University of San Marcos (Peru); Doctorat en Études Iberiques, University of Paris III (France)
- Baral, Chitta** (1999). Professor of Computer Science and Engineering; B.Tech., Indian Institute of Technology (India); M.S., Ph.D., University of Maryland, College Park
- Barcelo, Hélène** (1990). Associate Professor of Mathematics and Statistics; Ms.C., University of Quebec (Canada); Ph.D., University of California, San Diego
- Bardewyck, Loretta A.** (1957). Professor Emerita of Nursing; Dean Emerita, College of Nursing; P.H.N., B.S., University of Minnesota, Twin Cities; M.S., Cornell University
- Bardrick, Richard A.** (1956). Professor Emeritus of Psychology; A.B., Ph.D., University of California, Los Angeles
- Barefield, Robert** (2003). Assistant Professor of Music; B.A., Washington University, St. Louis; M.B.A., University of Maryland, College Park; M.M., D.M.A., University of Cincinnati
- Barker, David** (1983). Professor of Theatre; B.S.E., Duquesne University; M.F.A., Rutgers, The State University of New Jersey
- Barkley, Margaret V.** (1963). Professor Emerita of Family and Human Development; B.S., Millikin University; M.S., Ed.D., University of Illinois
- Barkson, Joseph A.** (1958). Professor Emeritus of Engineering; B.S.E.E., University of Michigan; M.S., Ph.D., University of Illinois
- Barlow, Richard B.** (1964). Professor Emeritus of History; B.A., M.A., Ph.D., University of Pennsylvania
- Barnard, John P.** (1991). Learning Resources Specialist Emeritus; B.S., State University of New York; M.Ed., Ph.D., Arizona State University
- Barnes, Andrew** (1996). Associate Professor of History; B.A., Wesleyan University; M.A., Ph.D., Princeton University
- Barona, Andrés** (1986). Professor of Psychology in Education; B.S., M.Ed., Texas A&M University; Ph.D., University of Texas, Austin

- Barone, Thomas E.** (1990). Professor of Curriculum and Instruction and Educational Leadership and Policy Studies; Associate Dean, Teacher Education; Interim Director, Division of Curriculum and Instruction; B.A., M.A., Loyola University, New Orleans; Ed.D., Stanford University
- Barratt, Mark** (2002). Assistant Professor of Supply Chain Management; B.A., University of Greenwich (United Kingdom); Ph.D., Cranfield School of Management (United Kingdom)
- Barrera, Manuel** (1977). Professor of Psychology; B.S., University of Wisconsin, Eau Claire; M.A., Ph.D., University of Oregon
- Barrett, Marianne** (1994). Associate Professor of Journalism and Mass Communication; B.S., Kutztown University; M.P.S., Syracuse University; Ph.D., Michigan State University
- Barroll-Aschaffenburg, Rayna** (1980). Professor Emerita of Music; B.M., University of Texas; D.M.A., University of Maryland, College Park
- Barry, Rebecca E.** (2002). Assistant Professor of Recreation Management and Tourism; B.A., University of Utah; M.A., Middlebury College; Ph.D., University of Utah
- Bartels, Robert D.** (1981). Professor of Law; B.A., University of Michigan; J.D., Stanford University
- Bartlett, Mark** (2000). Associate Law Librarian; B.A., University of New Brunswick (Canada); M.L.I.S., Dalhousie University (Canada)
- Barto, Michelle** (1999). Lecturer of Speech and Hearing Science; B.A., M.Ed., Arizona State University
- Bartolomei, Carmen** (1999). Faculty Associate of Nursing; B.S.N., M.P.S., C.W. Post College, Long Island University
- Barton, C. Michael** (1987). Professor of Anthropology; Collections Administrator; B.A., University of Kansas; M.A., Ph.D., University of Arizona
- Barton, John L.** (1994). Senior Lecturer of Psychology; B.A., University of Nebraska, Lincoln; M.A., Ph.D., Arizona State University
- Bartz, Donna** (1968). Professor Emerita of Theatre; B.F.A., M.A., University of Colorado
- Bashford, Howard H.** (1997). Associate Professor of Construction; B.S., M.S., University of Wyoming; Ph.D., Brigham Young University
- Batalden, Stephen K.** (1976). Professor of History; Coordinator of Russian, East European Studies Consortium; B.A., Augsburg College; M.A., Ph.D., University of Minnesota
- Bates, Dawn W.** (1989). Associate Professor of English; B.A., Ph.D., University of Washington
- Bates, Mary** (1996). Professor of Art; B.F.A., Colorado State University; M.F.A., Indiana University
- Baty, Wayne M.** (1962). Professor Emeritus of Supply Chain Management; B.S., Southwest Missouri State College; M.A., Northwestern University; Ph.D., University of Southern California
- Bauer, Ernst** (1990). Distinguished Research Professor of Physics and Astronomy; Diplom., Dr. rer. nat., University of Munich (Germany)
- Bauer, Richard** (2000). Lecturer of Chemistry and Biochemistry; B.S., Saginaw Valley State University; M.S., Ph.D., Purdue University
- Bazzi, Rida** (1996). Associate Professor of Computer Science and Engineering; B.E., American University of Beirut (Lebanon); M.S., Ph.D., Georgia Institute of Technology

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Beals, Stephen P. (1996), Adjunct Professor of Speech and Hearing Science; B.S., Calvin College; M.D., Wayne State University College of Medicine

Beardmore, Gary D. (1979), Associate Research Technologist of Geological Sciences; B.A., Arizona State University

Béarat, Hamdallah (2003), Adjunct Professor of Anthropology; B.S., Birzeit University (Palestine); D.E.A., Ph.D., Caen University (France)

Beck, Lasca (1984), Professor Emerita of Nursing; B.S.N., Texas Woman's University; M.S., Texas A&M University, Commerce

Beckman, James R. (1980), Associate Professor of Chemical Engineering; Associate Chair for Department of Chemical and Materials Engineering; B.S., M.S., University of Wisconsin; Ph.D., University of Arizona

Bedard, Roger L. (1990), Evelyn Smith Family Endowed Professor of Theatre; B.A., University of Northern Iowa; M.F.A., University of Oregon; Ph.D., University of Kansas

Bedient, Jack D. (1963), Professor Emeritus of Mathematics and Statistics; A.B., Albion College; M.B.S., Ed.D., University of Colorado

Bedworth, David D. (1963), Professor Emeritus of Industrial Engineering; B.S.I.E., Lamar College of Technology; M.S.I.E., Ph.D., Purdue University

Beer, Lawrence (2003), Lecturer of Management; B.S. Boston University; J.D., St. John's University

Begaye, Timothy (2003), Assistant Professor of Educational Leadership and Policy Studies; B.S., Northeastern University; M.Ed., Ed.D., Harvard University

Beggs, Donald (1999), Lecturer of the Barrett Honors College; Faculty Chair, the Barrett Honors College; A.B., University of California, Berkeley; Ph.D., University of California, Santa Cruz

Bell, George H. (1976–82; 1989), Librarian Emeritus, Noble Science Reference Services; B.A., William Paterson College; M.L.S., Pratt Institute

Bell, James W. (1966), Professor Emeritus of Curriculum and Instruction; B.A., Washburn University of Topeka; M.Ed., Ed.D., University of Kansas

Bell, John E. (1965), Professor Emeritus of Curriculum and Instruction; B.S., University of Nebraska, Lincoln; M.A., Ed.D., University of Wyoming

Bell, Mary E. (1970), Professor Emerita of Education; B.S., Indiana State Teachers College; M.S., Butler University; Ed.D., Indiana University, Bloomington

Bell, Shirley (1988), Clinical Professor of Nursing; B.S.N., University of Cincinnati; M.S.N., Wayne State University; Ed.D., West Virginia University

Bellamy, Lynn (1976), Professor Emeritus of Chemical Engineering; B.S., Texas A&M University; M.S., Ph.D., Tulane University

Belok, Michael V. (1959), Professor Emeritus of Education; B.S., Indiana University, Bloomington; M.A., Arizona State University; Ph.D., University of Southern California

Bender, Bert A. (1971), Professor Emeritus of English; B.A., University of Washington; Ph.D., University of California, Irvine

Bender, Diane (2002), Assistant Professor of Design; B.A., M.A., Ph.D., Michigan State University

Bender, Gordon L. (1953), Professor Emeritus of Life Sciences; B.S., Iowa State College; M.S., University of Wisconsin; Ph.D., University of Illinois

Bender, Paul (1984), Professor of Law; A.B., LL.B., Harvard University

Benesh, Susan (1999), Faculty Associate of Nursing; B.S.N., M.S., Arizona State University

Benin, David B. (1970), Professor Emeritus of Physics and Astronomy; A.B., Cornell University; M.A., Ph.D., University of Rochester

Benin, Mary B. (1979), Associate Professor of Sociology; B.A., Vanderbilt University; M.A., Ph.D., University of Nebraska, Lincoln

Benn, James A. (2001), Assistant Professor of Religious Studies; B.A., University of Cambridge (England); M.A., University of London (England); Ph.D., University of California, Los Angeles

Bennett, Peter A. (1984), Professor of Physics and Astronomy; B.A., University of Minnesota, Duluth; Ph.D., University of Wisconsin, Madison

Benzinger, Robert P. (1970), Professor Emeritus of Design; B.S.M.E., University of Wisconsin, Madison; M.A.E., Chrysler Institute of Engineering

Berch, Michael A. (1969), Professor of Law; B.A., J.D., Columbia University

Berens, Michael E. (1995), Adjunct Professor of Life Sciences; B.S., Arizona State University; Ph.D., University of Arizona



Berliner, David C.

(1987)

Regents' Professor of Educational Leadership and Policy Studies and Psychology in Education; B.A., University of California, Los Angeles; M.A., California State University, Los Angeles; Ph.D., Stanford University

Berman, David R. (1966), Professor Emeritus of Political Science; B.A., Rockford College; M.A., Ph.D., American University

Berman, Neil S. (1964), Professor Emeritus of Chemical Engineering; B.S., University of Wisconsin; M.S., M.A., Ph.D., University of Texas

Bernardi, Jose (1995), Associate Professor of Design; B.Arch., National University of Cordoba; M.S., University of Cincinnati

Bernstein, Bianca L. (1987), Professor of Counseling and Counseling Psychology; B.A., University of California, Berkeley; M.Ed., Ph.D., University of California, Santa Barbara

Bertelsen, Wendle R. (1964), Professor Emeritus of Architecture; B.Arch., University of Michigan; M.Arch., University of Arizona

Bertram, Susan M. (1998), Assistant Research Professor; H.B.Sc., M.Sc., Trent University (Canada); Ph.D., Arizona State University

Bess, Vicki (1994), Adjunct Professor of Life Sciences; M.S., Arizona State University

Betz, M. Austin (1974), Professor Emeritus of Education; B.S., Lock Haven State College; M.Ed., Pennsylvania State University; M.A.T., Brown University; M.A., Ph.D., University of Illinois

Betz, Mathew J. III (1961), Professor Emeritus of Civil Engineering; B.S., M.S., Ph.D., Northwestern University

Bhattacharya, Sourav (1996), Associate Professor of Computer Science and Engineering; B.E., Jadavpur University (India); M.Tech., Indian Institute of Technology (India); M.S., University of Southwestern Louisiana; Ph.D., University of Minnesota

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- Bhattacharya, Sudipto** (2003), Professor of Finance; B.S., University of Delhi (India); Postgraduate Diploma, Indian Institute of Management (India); Ph.D., Massachusetts Institute of Technology
- Biblarz, Dora** (1980), Librarian Emerita; B.A., M.L.S., University of California, Los Angeles; M.A., University of California, Davis
- Bickford, William B.** (1966), Professor Emeritus of Engineering; B.S., M.S., Kansas State University; Ph.D., University of Illinois
- Bieber, Allen L.** (1963), Professor Emeritus of Chemistry and Biochemistry; Director, Interdisciplinary Committee on Molecular and Cellular Biology; B.S., M.S., North Dakota State University; Ph.D., Oregon State University
- Bingham, Scott** (1989), Senior Research Scientist of Life Sciences; B.S., Brown University; Ph.D., Brandeis University
- Binkley, Roberta A.** (2001), Lecturer of English; B.A., Colorado State University; M.A., Ph.D., University of Arizona
- Bird, Jonathan Paul** (1997), Associate Professor of Electrical Engineering; B.S., D.Phil., University of Sussex (United Kingdom)
- Birge, Edward A.** (1972), Professor Emeritus of Life Sciences; B.A., Ph.D., University of Wisconsin, Madison
- Birk, James P.** (1973), Professor Emeritus of Chemistry and Biochemistry; B.A., Saint John's University; Ph.D., Iowa State University
- Birney, Rick** (1990), Senior Lecturer of Computer Information Systems; B.A., Arizona State University; M.S., University of Maryland
- Birtcher, Craig R.** (1987), Associate Research Professional, Electrical Engineering; B.S.E., M.S., Arizona State University
- Bitner, Mary Jo** (1987), Professor of Marketing; PETsMART Chair in Services Leadership; B.A., M.B.A., Ph.D., University of Washington
- Bitter, Gary G.** (1970), Professor of Curriculum and Instruction and Psychology in Education; B.S., Kansas State University; M.A., Kansas State Teachers College; Ph.D., University of Denver
- Bivona, Daniel** (1996), Associate Professor of English; Associate Dean, Academic Programs, College of Liberal Arts and Sciences; B.A., University of Connecticut; M.A., Northeastern University; Ph.D., Brown University
- Bjork, Robert E.** (1983), Professor of English; Director, Arizona Center for Medieval and Renaissance Studies; B.A., Pomona College; M.A., Ph.D., University of California, Los Angeles
- Blackham, Garth J.** (1962), Professor Emeritus of Counselor of Education; B.S., M.S., Utah State University; Ph.D., Cornell University
- Blackledge, Vernon O.** (1969), Professor Emeritus of Computer Science and Engineering; B.S.E.E., University of Illinois; M.S.E.E., University of Santa Clara; Ph.D., Arizona State University
- Blackman, William C.** (1988), Research Professional Emeritus, Center for Environmental Studies; B.S., M.S., University of Missouri; M.P.A., University of Southern California; D.P.A., University of Colorado
- Blackson, Thomas** (1995), Associate Professor of Philosophy; B.A., DePauw University; Ph.D., University of Massachusetts
- Blakemore, Arthur E.** (1979), Professor of Economics; Chair, Department of Economics; B.S., M.A., University of Detroit; Ph.D., Southern Illinois University, Carbondale
- Blancero, Donna** (1993), Assistant Professor of Management; B.S., College of Old Westbury; M.S., New York Institute of Technology; Ph.D., Cornell University
- Blanchard, Jay S.** (1988), Professor of Psychology in Education; B.A., Drake University; M.S.T., Drake University; Ph.D., University of Georgia
- Blankenship, Robert E.** (1985), Professor of Chemistry and Biochemistry; Chair, Department of Chemistry and Biochemistry; B.S., Nebraska Wesleyan College; Ph.D., University of California, Berkeley
- Blasingame, James B. Jr.** (2000), Assistant Professor of English; B.A., University of Northern Iowa; M.Ed., Drake University; Ph.D., University of Kansas, Lawrence
- Blasko, Vincent J.** (1980), Associate Professor of Marketing; B.S., M.B.A., Arizona State University; Ph.D., University of Texas, Austin
- Bley, Patricia** (2002), Faculty Associate of Nursing; B.S.N., Arizona State University; M.S.N., University of Phoenix
- Bloom, Irene** (1997), Lecturer of Mathematics and Statistics; B.A., M.S., University of Miami
- Blouin, Deborah K.** (1971), Librarian Emerita, Hayden Reference Services; B.A., Cedar Crest College; M.L.S., State University of New York, Albany
- Blount, Douglas J.** (1990), Associate Professor of Mathematics and Statistics; B.S., M.S., Ph.D., University of Wisconsin, Madison
- Blumenfeld-Jones, Donald** (1990), Associate Professor of Curriculum and Instruction; B.A., Rutgers, The State University of New Jersey; M.F.A., Ed.D., University of North Carolina, Greensboro
- Boatsman, James R.** (1986), KPMG Professor of Accountancy; Director, School of Accountancy; B.S., M.S., Oklahoma State University; Ph.D., University of Texas, Austin
- Boatsman, Joyce L.** (1996), Lecturer of Accountancy; B.S., Oklahoma State University; M.Tax., Arizona State University
- Bodman, Denise** (1996), Senior Lecturer of Family and Human Development; B.S., M.S., Arizona State University
- Bogardus, Clifton** (1992), Adjunct Professor of Life Sciences; M.D., University of Rochester
- Bogart, Quentin J.** (1970), Professor Emeritus of Educational Leadership and Policy Studies; B.A., M.S., Fort Hayes State College; Ph.D., University of Texas, Austin
- Boggs, Lohnie J.** (1959–65; 1966), Professor Emeritus of Supply Chain Management; B.S., M.S., Ph.D., Ohio State University
- Bohlander, George W.** (1977), Professor Emeritus of Management; B.A., San Francisco State College; M.B.A., University of Southern California; Ph.D., University of California, Los Angeles
- Bohlman, Herbert M.** (1964), Professor Emeritus of Supply Chain Management; B.A., B.S., Drake University; M.B.A., J.D., Indiana University
- Bolin, Robert** (1997), Professor of Sociology; B.A., Ph.D., University of Colorado
- Bolton, Cynthia J.** (1997), Senior Lecturer of Philosophy; B.G.S., University of Michigan; M.A., Ph.D., Michigan State University
- Bonanni, Domenico** (1997), Assistant Librarian, Hayden Reference Services; B.A., University of Alberta (Canada); B.A., Arizona State University; M.L.I.S., Dalhousie University (Canada)
- Bontemps, Arna Alexander** (2001), Associate Professor of African American Studies; B.A., Fisk University; M.A., Atlanta University; Ph.D., University of Illinois

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- Booksh, Karl S.** (1996), Associate Professor of Chemistry and Biochemistry; B.S., University of Alaska; Ph.D., University of Washington
- Booth, James R.** (1980), Professor of Finance; B.S., M.A., Ph.D., University of Alabama
- Boradkar, Prasad** (2000), Assistant Professor of Design; B.E., Maharaja Sayajirao University, Baroda (India); M.Des., Industrial Design Centre, Bombay (India); M.A., Ohio State University, Columbus
- Borgo, Philip E.** (1967), Professor Emeritus of Civil Engineering; B.S.C.E., University of Cincinnati; M.S., Ohio State University
- Borovansky, Vladimir R.** (1968), Librarian Emeritus. Collection Development; M.L.S., Ph.D., Charles University, Prague (Czechoslovakia)
- Bortner, Peg** (1979), Associate Professor of Justice Studies; Director, Center for Urban Inquiry; B.A., Edinboro State College; M.A., Ohio University; Ph.D., Washington University
- Bossen, Karen** (1997), Assistant Instructional Professional of Recreation Management; B.A., Washington State University; M.Ed., Northern Arizona University
- Boswell, Jacquelyn** (1982), Professor Emerita of Music; B.M.E., Murray State University; M.M.E., Louisiana State University; Ed.D., University of Illinois
- Boulin Johnson, Leonor** (1987), Associate Professor of African American Studies; B.S., East Tennessee State University; M.S., Ph.D., Purdue University
- Bowers, Charles O.** (1948), Professor Emeritus of Music; B.S., Southeast Missouri State College; M.M., D.M.A., University of Rochester
- Boyd, Brian** (1996), Associate Professor of Management; Director, M.B.A. High Technology Program; B.S., Suffolk University; M.A., University of Connecticut; Ph.D., University of Southern California
- Boyd, James H.** (1976), Professor Emeritus of Accountancy; B.B.A., Texas Christian University; M.S., Northeastern University; Ph.D., University of Texas, Austin; C.P.A., Texas
- Boyd, Thomas A.** (2002), Lecturer of Computer Science and Engineering; B.A., Illinois State University; M.S., Ph.D., Arizona State University
- Boyer, Don L.** (1988), Professor of Mechanical and Aerospace Engineering; B.S., Rensselaer Polytechnic Institute; Ph.D., Johns Hopkins University
- Boyer, Jay M.** (1976), Professor of English; B.A., Saint Louis University; M.A., Ph.D., State University of New York, Buffalo
- Boyes, William J.** (1974), Professor of Economics; B.S., Idaho State University; Ph.D., Claremont Graduate School
- Boylan, Amy Cooper** (1986), Academic Associate, Division of Undergraduate Academic Services; Academic Advisor; B.S.W., M.C., Arizona State University
- Boyle, Bernard M.** (1969), Professor Emeritus of Architecture; B.Arch., University of Sydney (Australia); M.Arch., M.A., Ph.D., Yale University
- Brack, O M Jr.** (1973), Professor of English; B.A., M.A., Baylor University; Ph.D., University of Texas, Austin
- Brada, Josef C.** (1978), Professor of Economics; Director, International Business Studies; B.S., M.A., Tufts University; Ph.D., University of Minnesota, Twin Cities
- Bramlett-Solomon, Sharon** (1986), Associate Professor of Journalism and Mass Communication; B.A., M.A., Memphis State University; Ph.D., Indiana University, Bloomington
- Brandon, Tedd A.** (1981), Senior Research Professional of Bioengineering; Director, Animal Care Facility; B.S., University of California, Davis
- Brandt, Beverly K.** (1987), Professor of Design; B.F.A., University of Michigan; M.A., Michigan State University; Ph.D., Boston University
- Brandt, Elizabeth A.** (1974), Professor of Anthropology; B.A., Florida State University; M.A., Ph.D., Southern Methodist University
- Branstetter, Ellamae** (1967), Professor Emerita of Nursing; B.S., St. Louis University; M.P.H., University of Minnesota, Twin Cities; Ph.D., University of Chicago
- Braun, J. Jay** (1973), Professor Emeritus of Psychology; B.A., University of Oregon; M.A., Ph.D., Ohio State University
- Braver, Sanford L.** (1970), Professor of Psychology; B.A., Wayne State University; Ph.D., University of Michigan
- Bray, Sandra** (1987), Librarian Emerita, Technical Services Department; B.A., Ottawa University; M.L.S., Indiana University, Bloomington
- Brazel, Anthony J.** (1974), Professor of Geography; B.A., M.A., Rutgers, The State University of New Jersey; Ph.D., University of Michigan
- Breckenridge, Jack D.** (1962), Professor Emeritus of Art; B.S., University of Wisconsin, Milwaukee; M.F.A., University of Iowa
- Brem, Sarah Kate** (1999), Assistant Professor of Psychology in Education; A.B., University of Chicago; M.S., Ph.D., Northwestern University
- Bremner, Andrew** (1984), Professor of Mathematics and Statistics; Chair, Department of Mathematics and Statistics; B.A., M.A., University of Oxford (United Kingdom); Ph.D., University of Cambridge (United Kingdom)
- Brenenstuhl, Daniel C.** (1978), Professor Emeritus of Management; B.S., M.B.A., Ohio University; M.S., St. Bonaventure University; D.B.A., Indiana University
- Brennan, Patrick** (1996), Professor of Law; Associate Dean for Academic Affairs and Research, College of Law; B.A., Yale University; M.A., University of Toronto; J.D., University of California, Berkeley
- Briggs, John M.** (1999), Associate Professor of Life Sciences; B.S., M.Sc., Pittsburg State University; Ph.D., University of Arkansas
- Briley, Lane D.** (1970), Associate Research Professional of Chemistry and Biochemistry; B.A., Arizona State University
- Brillhart, Barbara** (1996), Associate Professor of Nursing; B.S.N., M.S.N., California State University, Los Angeles; Ph.D., Texas Woman's University
- Brink, Jean R.** (1974), Professor Emerita of English; B.A., Northwestern University; M.A., Harvard University; Ph.D., University of Wisconsin, Madison
- Britton, Daniel R.** (1976), Professor of Art; B.F.A., M.F.A., University of Colorado
- Britton, David** (1987), Professor of Music; B.M., North Texas State University
- Broadley, Hugh T.** (1969), Professor Emeritus of Art; A.B., Park College; M.A., Yale University; Ph.D., New York University
- Broman, Tannah** (2003), Lecturer of Kinesiology; B.A., New Mexico State University; M.S., Arizona State University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- Brooks, Daniel G.** (1981), Associate Professor of Supply Chain Management; Director, Executive M.B.A. Program; B.S., M.S., Colorado School of Mines; M.B.A., Ph.D., Indiana University, Bloomington
- Brooks, Talbot** (2001), Assistant Research Professional of Geography; Network Administrator; B.S., Rochester Institute of Technology; M.S., Arizona State University
- Broome, Benjamin J.** (1999), Professor of Communication; B.A., University of Georgia; M.A., Ph.D., University of Kansas
- Brophy, Colleen** (2000), Research Professor of Bioengineering; B.S., M.D., University of Utah
- Brose, Marianna F.** (1963), Professor Emerita of English; B.A., College of William and Mary; Diploma, Royal Academy of Dramatic Art (United Kingdom); M.A., Arizona State University
- Brouwer, Daniel C.** (2000), Assistant Professor of Communication; B.Sc., Ohio University; M.A., Ph.D., Northwestern University
- Brown, Alan R.** (1968), Associate Professor of Education; B.A., M.A., California State University, Los Angeles; Ph.D., University of Texas, Austin
- Brown, Brent W.** (1972), Professor Emeritus of Public Affairs; B.A., Brigham Young University; M.A., Arizona State University; Ph.D., University of Illinois
- Brown, Claudia** (1998), Associate Professor of Art and History; Director, Center for Asian Studies; B.A., M.A., M.Phil., Ph.D., University of Kansas
- Brown, David E.** (1993), Adjunct Professor of Life Sciences; B.A., San Jose State College
- Brown, Duane** (1950), Professor Emeritus of Chemistry and Biochemistry; B.S., Brigham Young University; Ph.D., Cornell University
- Brown, Jean C.** (1991), Clinical Associate Professor of Speech and Hearing Science; B.S., University of Montevallo; M.A., University of Tennessee; M.S.W., Arizona State University
- Brown, Stephen W.** (1974), Professor of Marketing; Edward M. Carson Chair of Services Marketing; Director, Center for Services Leadership; B.S., M.B.A., Ph.D., Arizona State University
- Brown, Theodore M.** (1963), Professor Emeritus of Chemistry and Biochemistry; B.S., M.S., University of Toledo; Ph.D., Iowa State University
- Brown, Theresa** (2000), Faculty Associate of Nursing; B.S.N., Arizona State University
- Brown, William A.** (1999), Assistant Professor of Recreation Management and Tourism; B.S., Northeastern University; M.A., Ph.D., Claremont Graduate University
- Bruhn, Karen** (1998), Senior Lecturer of the Barrett Honors College; B.A., City University of New York; M.A., Ph.D., University of North Carolina, Chapel Hill
- Brune, Daniel C.** (1986), Senior Research Professional of Chemistry and Biochemistry; B.A., University of Kansas; Ph.D., Indiana University, Bloomington
- Bruner, May I.** (1961), Professor Emerita of Nursing; B.S., University of Hawaii, Honolulu; M.S., University of Colorado
- Brungart, Jennifer** (2002), Assistant Professor of Design; B.S., University of Cincinnati; M.G.D., North Carolina State University
- Brunning, Dennis R.** (1984), Librarian, Collection Development; B.A., University of Iowa; M.A., M.L.S., University of Illinois
- Bryan, Harvey** (1999), Professor of Architecture; B.Arch., Arizona State University; M.Arch., M.Sc., Ph.D., University of California, Berkeley
- Bryan, Karen M.** (1997), Assistant Professor of Music; Associate Director, Undergraduate Studies, School of Music; B.M., Georgia State University, Atlanta; M.A., University of Georgia, Atlanta; Ph.D., Indiana University, Bloomington
- Bryan, Tanis** (1992), Adjunct Professor of Speech and Hearing Science; B.S., M.A., Ph.D., Northwestern University
- Bryant, Edwin H.** (2000), Adjunct Professor of Life Sciences; A.B., California State University; Ph.D., University of Kansas
- Bryant, Fred O.** (1950), Professor Emeritus of Kinesiology; B.S., Springfield College; M.S., University of Illinois; Ed.D., Arizona State University
- Bruzy, Stephanie** (1995), Associate Professor of Social Work; B.S.W., Indiana University, Bloomington; M.S.W., University of Illinois, Urbana-Champaign; Ph.D., Ohio State University
- Buck, Elizabeth** (2000), Associate Professor of Flute; B.A., M.M., The Juilliard School; D.M.A., Rice University
- Buck, Nancy** (2002), Associate Professor of Music; B.M., Oberlin College; M.M., The Cleveland Institute of Music
- Buckingham, Willis J.** (1969), Professor Emeritus of English; A.B., Harvard University; M.S., University of Wisconsin, Madison; Ph.D., Indiana University
- Buksbaum, Rebecca** (2000), Faculty Associate of Nursing; B.A., University of Illinois; M.S.N., University of Hartford, West Hartford
- Buley, Jerry L.** (1973), Associate Professor of Communication; B.A., University of Colorado; M.A., Michigan State University; Ph.D., Florida State University
- Burdick, Richard K.** (1976), Professor of Economics; B.S., University of Wyoming; M.S., Ph.D., Texas A&M University
- Burg, B. Richard** (1967), Professor of History; B.A., University of Colorado; M.A., Western State College of Colorado; Ph.D., University of Colorado
- Burgess, Paul L.** (1969), Professor of Economics; B.A., Ph.D., University of Colorado
- Burgoyne, Edward E.** (1951), Professor Emeritus of Chemistry and Biochemistry; B.S., Utah State University; M.S., Ph.D., University of Wisconsin, Madison
- Burke, Janet M.** (1996), Assistant Administrative Professional, the Barrett Honors College; Associate Dean, the Barrett Honors College; B.A., Wells College; M.A., Syracuse University; Ph.D., Arizona State University
- Burke, Rebecca J.** (1981), Librarian Emerita; B.A., San Jose State University; M.L.S., University of Arizona
- Burke, William F. Jr.** (1977), Professor of Life Sciences; B.A., University of Dallas; M.S., North Texas State University; Ph.D., Arizona State University
- Burnette, Wendell** (2000), Assistant Professor of Architecture
- Burnham, Maralou E.** (1988), Assistant Research Scientist, Center for Advanced Research in Transportation; B.A., University of Southern California; M.A., Ph.D., Arizona State University
- Burns, Elizabeth K.** (1983), Professor of Geography; Director, Center for Advanced Transportation Research; B.A., Smith College; M.A., Ph.D., University of California, Berkeley
- Burrows, Veronica** (1986), Associate Professor of Chemical Engineering; B.S., Drexel University; Ph.D., Princeton University
- Burstein, David** (1982), Professor of Physics and Astronomy; B.A., Wesleyan University; Ph.D., University of California, Santa Cruz

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Burstein, Karen (1998). Lecturer of Curriculum and Instruction; B.A.E., M.A., Ph.D., Arizona State University

Burt, Donald M. (1974). Professor of Geological Sciences; A.B., Princeton University; A.M., Ph.D., Harvard University

Burton, Dora (1976). Professor Emerita of Russian; M.D., First Leningrad and Kazan Medical Institute (Russia); M.A., Ph.D., University of Washington

Burton, Foster M. (1969). Professor Emeritus of Construction; B.S.C.E., B.S., Carnegie Institute of Technology; M.B.A., New York University; Ph.D., University of Pittsburgh



Buseck, Peter R.
(1963)

Regents' Professor of Chemistry and Biochemistry and Geological Sciences; B.A., Antioch College; M.A., Ph.D., Columbia University

Bush, Jeffrey E. (1997). Associate Professor of Music Education; B.M., M.M., Northern Illinois University, De Kalb; Ph.D., University of Arizona

Butler, Jay Q. (1972). Associate Professor of Real Estate; Director, Arizona Real Estate Center; B.B.A., M.B.A., University of New Mexico; Ph.D., University of Washington

C

Cabana, Graciela S. (2003). Adjunct Professor of Anthropology; B.A., University of California, Berkeley; M.A., Ph.D., University of Michigan

Cabianca, William A. (1967). Professor Emeritus of Counselor Education; B.Ed., Gonzaga University; M.Ed., Ph.D., Washington State University

Cady, Linell E. (1983). Professor of Religious Studies; Interim Dean, College of Liberal Arts and Sciences; B.A., Newton College; M.T.S., Th.D., Harvard University

Calhoun, Ronald J. (2001). Assistant Professor of Mechanical and Aerospace Engineering; B.S., M.S., Ph.D., Stanford University

Calkins, Jerry M. (1992). Adjunct Professor of Bioengineering; B.S.Ch.E., M.S.Ch.E., University of Wyoming; Ph.D., University of Maryland, College Park; M.D., University of Arizona

Callarman, Thomas E. (1980). Associate Professor of Supply Chain Management; Director, Institute for Manufacturing Enterprise Systems; B.B.A., West Texas State University; M.B.A., Arizona State University; Ph.D., Purdue University

Calleros, Charles R. (1980). Professor of Law; B.A., University of California, Santa Cruz; J.D., University of California, Davis

Cam, Hasan (2001). Assistant Professor of Computer Science and Engineering; B.S., M.S., Istanbul Technical University (Turkey); Ph.D., Purdue University

Cameron, Theresa (1997). Associate Professor of Planning and Landscape Architecture; B.A., State University of New York, Buffalo; M.U.P., University of Michigan; D.Des., Harvard University

Campbell, Andrew (2002). Assistant Professor of Music; B.A., B.M., Oberlin College; M.M., Indiana University; D.M.A., University of Michigan

Campbell, Gary L. (1997). Associate Fine Arts Specialist; B.A., M.F.A., University of Southern California

Campbell, Heather E. (1991). Associate Professor of Public Affairs; B.A., University of California, San Diego; M.Phil., Ph.D., Carnegie Mellon University

Canary, Daniel J. (1999). Professor of Communication; B.A., M.A., California State University, Fullerton; M.A., Ph.D., University of Southern California

Candan, Kasim Selcuk (1997). Associate Professor of Computer Science and Engineering; B.S., Bilkent University (Turkey); Ph.D., University of Maryland, College Park

Candela, Giuseppe (1995). Associate Professor of Italian; M.A., Ph.D., University of Wisconsin

Candelaria, Cordelia C. (1992). Professor of English and Chicana and Chicano Studies; Chair, Department of Chicana and Chicano Studies; B.A., Fort Lewis College; M.A., Ph.D., University of Notre Dame

Canovas, Frédéric (1999). Associate Professor of French; Diplôme d'Études Universitaires Générales de Lettres Modernes, Maîtrise de Lettres Modernes, Diplôme d'Études Approfondies de Lettres Modernes, Lyon University (France); Ph.D., University of Oregon

Canright, James E. (1964). Professor Emeritus of Life Sciences; B.A., Miami University; A.M., Ph.D., Harvard University

Capco, David G. (1984). Professor of Life Sciences; B.S., Edinboro State College; M.S., University of Houston; Ph.D., University of Texas, Austin

Caplan, Michael R. (2002). Assistant Professor of Bioengineering; B.A., B.S., University of Texas, Austin; Ph.D., Massachusetts Institute of Technology

Catlaw, Thomas J. (2004). Assistant Professor of Public Affairs; B.A., Trinity College; M.P.A., George Washington University

Cardineau, Guy A. (2003). Research Professor of Life Sciences; B.S., Auburn University; Ph.D., University of Alabama, Birmingham

Cardy, Robert L. (1988). Professor of Management; B.S., Central Michigan University; Ph.D., Virginia Polytechnic Institute and State University

Carhart, Michael (2000). Assistant Research Scientist of Bioengineering; B.S., Milwaukee School of Engineering; Ph.D., Arizona State University

Carlson, A. Cheree (1988). Professor of Communication; B.A., M.A., Colorado State University; Ph.D., University of Southern California

Carlson, Ingeborg L. (1964). Professor Emerita of German; Abitur, Hölderlin School (Germany); Vorsemaster and cand.phil., University of Heidelberg (Germany); Dr. phil., University of Erlangen-Nuremberg (Germany)

Carlson, Marilyn P. (1995). Associate Professor of Mathematics and Statistics; Interim Director, Center for Research on Education in Science, Mathematics, Engineering, and Technology; B.S., Central Missouri State University; M.S., Ph.D., University of Kansas



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Regents' Professor of English; B.A., M.A., University of Utah

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- Carney, James D.** (1967), Professor Emeritus of Philosophy; B.A. equivalent, Northern Baptist Theological Seminary; M.A., Roosevelt University; Ph.D., University of Nebraska, Lincoln
- Carpenter, Ellon D.** (1988), Associate Professor of Music; B.A., Denison University; M.A., Kent State University; Ph.D., University of Pennsylvania
- Carpenter, Ray W.** (1981), Professor of Solid State Science; B.S., M.S., Ph.D., University of California, Berkeley
- Carr, Christopher** (1985), Professor of Anthropology; B.A., University of Illinois; M.A., Ph.D., University of Michigan
- Carroll, Kevin K.** (1975), Associate Professor of History; B.A., Canisius College; M.A., Ph.D., Harvard University
- Carroll, Steven** (1985), Professor Emeritus of Life Sciences; B.S., Tulane University; M.S., Oregon State University; Ph.D., University of Oregon
- Carter, Joseph R.** (1991), Avnet Professor of Supply Chain Management; Chair, Department of Supply Chain Management; B.S., M.B.A., Northeastern University; Ph.D., Boston University
- Carter, Phillip L.** (1995), Professor of Supply Chain Management; Harold E. Fearon Chair, Purchasing Management; Director, Center for Advanced Purchasing Studies; B.S.E.E., Rose-Hulman Institute of Technology; M.B.A., D.B.A., Indiana University
- Carver, George L.** (1965), Professor Emeritus of Classical Languages; B.A., M.A., University of Texas, Austin; S.T.B., Saint Mary's Seminary; Ph.D., Saint Louis University
- Caryl, James** (2003), Assistant Professor of Military Science; Business Manager, Department of Military Science; B.S., Arizona State University
- Casanova, Ursula** (1987), Professor Emerita of Educational Leadership and Policy Studies; B.A., Hunter College; M.S., State University of New York, Brockport; Ph.D., Arizona State University
- Casavantes, Michael D.** (1990), Lecturer of Journalism and Mass Communication; B.A., University of Texas, El Paso; M.A., New Mexico State University
- Case, James L.** (1969), Professor Emeritus of Speech and Hearing Science; B.S., Weber State College; M.S., Ph.D., University of Utah
- Cashman, Holly** (2001), Assistant Professor of Spanish; B.A., Hood College; M.A., Ph.D., University of Michigan, Ann Arbor
- Cassidy, Virginia L.** (1988), Librarian Emerita; A.B., Oberlin College; M.L.S., Pratt Institute
- Castaneda, Eddie** (1990), Associate Professor of Psychology; B.S., M.A., University of Texas, El Paso; Ph.D., University of Michigan
- Cate, Heather E.** (1995), Academic Associate; B.A., University of New Hampshire, Durham; M.A., Arizona State University
- Castillo-Chavez, Carlos** (2004), Professor of Mathematics and Statistics; B.S., University of Wisconsin, Stevens Point; M.S., University of Wisconsin, Milwaukee; Ph.D., University of Wisconsin, Madison
- Castle, Gregory** (1992), Associate Professor of English; B.A., California State University, Fresno; M.A., Ph.D., University of California, Los Angeles
- Castro, Felipe G.** (1991), Professor of Psychology; B.A., University of California, Santa Barbara; M.S.W., University of California, Los Angeles; Ph.D., University of Washington
- Caudle, M. Tyler** (1997), Assistant Professor of Chemistry and Biochemistry; B.S., University of North Carolina, Charlotte; Ph.D., Duke University
- Cavanaugh, Carolyn J.** (1996), Academic Associate of Psychology; A.B., Duke University; Ph.D., Arizona State University
- Cavender, Gray** (1977), Professor of Justice Studies; B.S., University of Tennessee; M.S., Middle Tennessee State University; Ph.D., Florida State University; J.D., University of Tennessee
- Cayer, N. Joseph** (1980), Professor of Public Affairs; B.A., M.P.A., University of Colorado; Ph.D., University of Massachusetts, Amherst
- Cervený, Randall S.** (1986), Professor of Geography; B.S., M.A., Ph.D., University of Nebraska, Lincoln
- Cesarotti, Evelyn L.** (1992), Associate Professor of Nursing; B.S.N., University of West Florida; M.S., Ph.D., University of Arizona
- Cesta, John R.** (1975), Associate Professor of Finance; B.S., Capital University; M.B.A., Ph.D., Florida State University
- Cevette, Michael J.** (1989), Adjunct Professor of Speech and Hearing Science; B.A., University of Nevada, Las Vegas; M.S., Utah State University; Ph.D., University of Utah
- Chade, Hector** (1997), Associate Professor of Economics; Licenciado en Economía, National University of Cuyo (Argentina); M.S., Ph.D., University of Illinois, Urbana-Champaign
- Chakrabarti, Chaitali** (1990), Associate Professor of Electrical Engineering; B.Tech., Indian Institute of Technology (India); M.S., Ph.D., University of Maryland, College Park
- Chamberland, Bertrand L.** (1995), Adjunct Professor of Chemistry and Biochemistry; B.A., St. Anselm's College; Ph.D., University of Pennsylvania
- Chamberlin, Ralph V.** (1986), Professor of Physics and Astronomy; B.S., University of Utah; M.S., Ph.D., University of California, Los Angeles
- Chambers, Anthony** (1998), Professor of Japanese; B.A., Pomona College; M.A., Stanford University; Ph.D., University of Michigan
- Chance, John K.** (1987), Professor of Anthropology; A.B., University of Pennsylvania; A.M., Ph.D., University of Illinois
- Chancy, Myriam** (1997), Associate Professor of English; B.A., University of Manitoba (Canada); M.A., Dalhousie University (Canada); Ph.D., University of Iowa
- Chandler, Douglas E.** (1980), Professor of Life Sciences; B.S., University of Rochester; M.A., Johns Hopkins University; Ph.D., University of California, San Francisco
- Chang, Yung** (1996), Associate Professor of Life Sciences; M.D., Beijing Medical College (China); Ph.D., University of Iowa
- Chaparian, Michael G.** (2000), Adjunct Professor of Life Sciences; B.S., Michigan Technological University; Ph.D., Wayne State University
- Chapman, Jeffrey** (1999), Professor of Public Affairs; Director, School of Public Affairs; A.B., Occidental College; M.A., Ph.D., University of California, Berkeley
- Chapuis, Jean-Charles** (1991), Senior Research Professional, Cancer Research Institute; B.S., Ph.D., University of Lausanne (Switzerland)
- Chartier, George M.** (1971), Professor Emeritus of Psychology; B.S., University of Illinois; M.A., Ph.D., University of Oregon
- Chase, Marcelle P.** (1983), Law Librarian Emeritus; M.L.S., Ball State University; J.D., University of Brussels (Belgium)
- Chasey, Allan D.** (1995), Associate Professor of Construction; B.S., Arizona State University; M.S., Air Force Institute of Technology; Ph.D., Virginia Polytechnic Institute and State University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Chasey, Eugene F. (1965). Professor Emeritus of Education; B.S., Northwestern State College; M.A., Colorado State College; Ed.D., University of Wyoming

Chassin, Laurie (1979). Professor of Psychology; B.A., Brown University; M.S., Ph.D., Columbia University

Chatha, Karamvir (2001). Assistant Professor of Computer Science and Engineering; B.S.E., University of Bombay (India); M.S., Ph.D., University of Cincinnati

Chattopadhyay, Aditi (1990). Professor of Mechanical and Aerospace Engineering; M.S., Ph.D., Georgia Institute of Technology

Chaudhuri, Joyotpal (1985). Professor Emeritus of Political Science; B.A., Central State University, Oklahoma; M.A., Ph.D., University of Oklahoma

Chawla, Nikhilesh (2000). Associate Professor of Materials Engineering; B.S., New Mexico Institute of Mining and Technology; M.S., University of Tennessee, Knoxville; Ph.D., University of Michigan, Ann Arbor

Chen, Kang Ping (1991). Associate Professor of Engineering; B.S., Peking University (China); Ph.D., University of Minnesota, Twin Cities

Chen, Nai-Kuang (1998). Assistant Professor of Computer Information Systems; B.B.A., Soochow University (Taiwan); M.S., George Washington University; Ph.D., University of Connecticut

Chen, Sandy (2003). Assistant Librarian, Technical Services Department; B.A., Fu Jen Catholic University (Taiwan); M.A., University of Missouri; M.L.S., Emporia State University

Chen, Stanley S. (1967). Professor Emeritus of Engineering; Diploma, Taipei Institute of Technology (Taiwan); M.S., Ohio University; Ph.D., University of Wisconsin, Madison

Chen, Yinong (2001). Lecturer of Computer Science and Engineering; B.S., M.S., Chongqing University (China); Ph.D., University of Karlsruhe (Germany)

Childress, Nancy (1991). Associate Professor of Mathematics and Statistics; B.S., B.S.Ed., M.S., Ph.D., Ohio State University

Chilton, Leslie Anne (1998). Academic Associate, Division of Undergraduate Academic Services; Coordinator, Writing Center; B.A., M.A., Ph.D., Arizona State University

Chin, Michelle (2001). Assistant Professor of Political Science; B.S., Andrews University; M.A., Ph.D., Texas A&M University

Chizmeshya, Andrew V.G. (1994). Associate Research Scientist, Center for Solid State Science; B.S., University of Toronto (Canada); M.Sc., Ph.D., Queen's University, Kingston (Canada)

Chlistowa, Xenia (1980). Professor Emerita of Dance

Choi, Hyaewol (1998). Associate Professor of Korean; B.A., M.A., Yonsei University (South Korea); Ph.D., State University of New York, Buffalo

Choi, Jaehoon (1989). Assistant Research Engineer, Telecommunication Research Center; B.S., Han-Yang University (South Korea); M.S., Ph.D., Ohio State University

Choi, Thomas (1998). Associate Professor of Supply Chain Management; A.B., University of California, Berkeley; Ph.D., University of Michigan

Chong, Herbert M., Major (2002). Professor of Military Science; Chair, Department of Military Science; B.S., West Texas A&M University; M.S., Kansas State University

Chou, Ju-Hsi (1975). Professor Emeritus of Art; B.A., University of Kentucky; M.A., Ph.D., Princeton University



Christensen, Philip R.
(1987)

Regents' Professor of Geological Sciences; B.S., M.S., Ph.D., University of California, Los Angeles

Christian, Charles W. (1985). Professor of Accountancy; B.B.A., University of Georgia; J.D., University of Virginia; Ph.D., University of Georgia

Christie, James F. (1988). Professor of Curriculum and Instruction; B.A., University of California, Berkeley; M.A., Syracuse University; Ph.D., Claremont Graduate School

Christine, Carol J. (1998). Clinical Assistant Professor of Curriculum and Instruction; B.A., M.A., Arizona State University; Ph.D., University of Arizona

Christopher, F. Scott (1986). Professor of Family and Human Development; B.S., M.S., University of Nebraska; Ph.D., Oregon State University

Chubrich, Robert E. (1971). Professor Emeritus of Speech and Hearing Science; B.A., Grinnell College; M.A., Indiana University, Bloomington; Ph.D., State University of New York, Buffalo

Church, Kathleen K. (1969). Professor of Life Sciences; Vice Provost; B.S., M.A., University of Utah; Ph.D., University of California, Berkeley



Cialdini, Robert B.
(1971)

Regents' Professor of Psychology; B.S., University of Wisconsin, Milwaukee; M.A., Ph.D., University of North Carolina, Chapel Hill

Cichacz, Zbigniew A. (1989). Associate Research Professor, Cancer Research Institute; M.Sc., Ph.D., Institute of Organic and Physical Chemistry (Poland)

Claiborn, Charles D. (1990). Professor of Counseling Psychology and Counselor Education; A.B., University of Missouri; M.A., Ohio State University; Ph.D., University of Missouri

Clark, Doug (2002). Assistant Professor of Curriculum and Instruction; B.A., University of North Carolina, Chapel Hill; M.A., Stanford University; Ph.D., University of California, Berkeley



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(1971)

Regents' Professor of Anthropology; B.A., M.A., University of Arizona; Ph.D., University of Chicago

Clark, James C. (1978). Associate Research Professional of Chemistry and Biochemistry

Clark, Robert C. (1981). Professor Emeritus of Music; B.Mus., Central Methodist College; S.M.M., Union Theological Seminary

Clark, William Dennis (1976). Associate Professor of Life Sciences; B.A., Sacramento State College; Ph.D., University of Texas, Austin

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- Clarke, Amanda B.** (2003), Assistant Professor of Geological Sciences; B.S., B.A., University of Notre Dame; Ph.D., The Pennsylvania State University
- Clay, J. Eugene** (1993), Associate Professor of Religious Studies; A.B., A.M., Ph.D., University of Chicago
- Clinton, Robert N.** (2001), Professor of Law; B.A., University of Michigan; J.D., University of Chicago
- Clothier, Ronald R.** (1955), Professor Emeritus of Life Sciences; A.B., Fresno State College; M.A., Montana State University; Ph.D., University of New Mexico
- Cluff, Gordon L.** (1963), Professor Emeritus of Speech and Hearing Science; B.A., Arizona State University; M.S., Ph.D., Southern Illinois University
- Cobas, José A.** (1975), Professor of Sociology; B.A., Maryville College; M.A., University of Tennessee, Knoxville; Ph.D., University of Texas, Austin
- Cocchiarella, Martha** (1998), Lecturer of Curriculum and Instruction; B.A., M.Ed., Ph.D., Arizona State University
- Cochran, Douglas** (1989), Associate Professor of Electrical Engineering; M.A., University of California, San Diego; Ph.D., Harvard University
- Cochran, Jeffery K.** (1984), Professor of Industrial Engineering; Associate Chair, Department of Industrial Engineering; B.S.E., M.S.N.E., M.S.I.E., Ph.D., Purdue University
- Cocke, Robert D.** (1983), Professor Emeritus of Art; B.F.A., University of Arizona; M.F.A., University of Iowa
- Codell, Julie F.** (1991), Professor of Art; A.B., Vassar College; M.A., University of Michigan; M.A., Ph.D., Indiana University
- Coghlan, William A.** (1990), Adjunct Professor of Chemical Engineering; B.S., Montana College of Mineral Science and Technology; M.S., Ph.D., Stanford University
- Cohen, Herbert G.** (1978), Professor Emeritus of Curriculum and Instruction; B.S., Muhlenberg College; M.A., Hofstra University; Ph.D., University of Iowa
- Cohen, Stewart M.** (1989), Professor of Philosophy; B.A., Wayne State University; M.A., University of California, Santa Barbara; Ph.D., University of Arizona
- Cohn, Sanford J.** (1979), Associate Professor of Curriculum and Instruction; B.A., M.Ed., Ph.D., Johns Hopkins University
- Colbert, Charles R.** (1998), Academic Associate of American Indian Studies; B.S., Northeastern Oklahoma State University; M.A., Ed.D., Arizona State University
- Colbourn, Charles** (2001), Professor of Computer Science and Engineering; B.Sc., University of Toronto (Canada); M.Math, University of Waterloo (Canada); Ph.D., University of Toronto (Canada)
- Colby, Arthur L.** (1965), Professor Emeritus of English; B.A., University of Massachusetts, Amherst; M.A., Ph.D., University of North Carolina, Chapel Hill
- Colby, Barbara F.** (1973), Academic Associate; B.A., University of Massachusetts, Amherst; M.A., Arizona State University
- Coles, Jeffrey L.** (1994), Professor of Finance; B.A., Pomona College; Ph.D., Stanford University
- Colina, Sonia** (1997), Associate Professor of Spanish; B.A., University of Compostela (Spain); M.A., Southern Illinois University, Carbondale; M.A., State University of New York, Binghamton; Ph.D., University of Illinois, Urbana-Champaign
- Collins, Daniel L.** (1989), Associate Professor of Art; B.A., University of California, Davis; M.A., Stanford University; M.F.A., University of California, Los Angeles
- Collins, James P.** (1975), Virginia M. Ullman Professor of Natural History and the Environment; Professor of Life Sciences; B.S., Manhattan College; M.S., Ph.D., University of Michigan
- Collins, Scott L.** (2002), Adjunct Professor of Life Sciences; B.A., Wittenberg University; M.S., Miami University; Ph.D., University of Oklahoma
- Collofello, James S.** (1979), Professor of Computer Science and Engineering; Associate Chair for Undergraduate Programs, Department of Computer Science and Engineering; B.S., M.S., Northern Illinois University; Ph.D., Northwestern University
- Comeaux, Malcolm L.** (1969), Professor Emeritus of Geography; B.A., University of Southwestern Louisiana; M.A., Southern Illinois University, Carbondale; Ph.D., Louisiana State University, Baton Rouge
- Comfort, Joseph R.** (1981), Professor of Physics and Astronomy; A.B., Ripon College; M.S., Ph.D., Yale University
- Comprix, Joseph** (2000), Assistant Professor of Accountancy; B.S., Ohio State University; Ph.D., University of Illinois, Urbana-Champaign
- Congdon, Justin D.** (2000), Adjunct Professor of Life Sciences; B.S., M.S., California State Polytechnic University; Ph.D., Arizona State University
- Conrad, Cheryl D.** (1997), Associate Professor of Psychology; B.S., University of California, Irvine; Ph.D., University of Illinois, Urbana-Champaign
- Conrow, Jane A.** (1968), Associate Dean Emerita, Library Services; B.A., M.L.S., Indiana University, Bloomington
- Cook, Edward A.** (1985), Associate Professor of Planning and Landscape Architecture; B.S.L.A., Washington State University; M.L.A., Utah State University; Ph.D., Wageningen University (Netherlands)
- Cook, Paul** (1987), Senior Lecturer of English; B.A., Northern Arizona University; M.A., Arizona State University; Ph.D., University of Utah
- Cook, Phil A.** (1963), Professor Emeritus of Education; B.A., Southwestern Oklahoma State College; M.A., Colorado State College; Ed.D., University of Kansas
- Cook, Suzanne M.** (1974), Professor Emerita of Management; B.B.A., M.B.A., D.B.A., Texas Tech University
- Coombs, Toni** (2002), Lecturer of Mathematics and Statistics; B.S., M.S., Arizona State University
- Cooper, Allene** (1997), Senior Lecturer of English; B.A., M.A., University of Utah; Ph.D., Arizona State University
- Coor, Lattie F.** (1990), Professor of Public Affairs; President Emeritus, Arizona State University; A.B., Northern Arizona University; M.A., Ph.D., Washington University
- Corder, Brice W.** (1971), Professor Emeritus of Kinesiology; B.A., Lynchburg College; M.Ed., Ed.D., Temple University
- Corey, Constance H.** (1973), Librarian Emerita; B.A., Denison University; M.L.S., University of Arizona; M.B.A., Arizona State University
- Corey, Frederick C.** (1987), Associate Professor of Communication; Associate Dean, College of Public Programs; B.S., Central Michigan University; M.S., Southern Illinois University, Carbondale; Ph.D., University of Arizona
- Corley, Elizabeth A.** (2003), Assistant Professor of Public Affairs; B.S.C.E., M.S., M.S.C.E., Ph.D., Georgia Institute of Technology
- Corman, Steven R.** (1987), Professor of Communication; B.S., Illinois State University; M.A., Ph.D., University of Illinois

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Corse, Taylor (1989), Associate Professor of English; B.A., Florida State University; M.A., University of Michigan; Ph.D., University of Florida

Cosand, Walter A. (1976), Professor of Music; B.M., M.M., University of Rochester

Cota-Cárdenas, Margarita (1981), Professor Emerita of Spanish; B.A., California State University, Turlock; M.A., University of California, Davis; Ph.D., University of Arizona

Couch, Sanford C. (1962), Professor Emeritus of Russian; B.A., M.A., Ph.D., University of Wisconsin, Madison

Coudert, Allison (1989), Professor of Religious Studies; B.A., Vassar College; Ph.D., University of London (United Kingdom)

Coudroglou, Alikei (1971), Professor Emerita of Social Work; B.A., College of Saint Benedict; M.S.W., University of Minnesota, Twin Cities; D.S.W., Columbia University

Coughlin, John Kevin (1994), Academic Associate, Division of Undergraduate Academic Services; B.A. (History), B.A. (Religious Studies), M.C., Arizona State University

Coursen, Jerry (1987), Research Scientist of Bioengineering; B.S., M.S., Arizona State University; Ph.D., University of Arizona

Cowgill, George L. (1990), Professor of Anthropology; A.M., University of Chicago; Ph.D., Harvard University

Cowley, Anne P. (1983), Professor of Physics and Astronomy; B.A., Wellesley College; M.S., Ph.D., University of Michigan



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(1969)

Regents' and Galvin Professor Emeritus of Physics and Astronomy; B.S., M.S., D.Sc., University of Adelaide (Australia); Ph.D., Massachusetts Institute of Technology

Cox, Ronnie R. (1987), Clinical Associate Professor of African American Studies; B.S., Fayetteville University; M.S., University of North Carolina; Ph.D., University of Tennessee

Craft, John E. (1973), Professor of Journalism and Mass Communication; B.F.A., M.A., Ph.D., Ohio University

Crafts-Brandner, Steven (1996), Adjunct Professor of Life Sciences; B.S., Western Kentucky University; M.S., Ph.D., University of Illinois

Crawford, John E. (1980), Professor Emeritus of Communication; B.A., Nebraska Wesleyan University; M.A., Sacramento State College; Ph.D., University of Southern California

Crawford, Neil (1997), Adjunct Professor of Bioengineering; B.S., University of California, Berkeley; M.S., Ph.D., Arizona State University

Creath, J. Richard (1974), Professor of Life Sciences and Philosophy; B.A., Knox College; M.A. (Philosophy), M.A. (History and Philosophy of Science), Ph.D., University of Pittsburgh

Creighton, Judith M. (1967), Professor Emerita of Family and Human Development; B.S., University of Arizona; M.S., M.C., Arizona State University; Ph.D., University of Arizona

Crewe, Katherine (1998), Assistant Professor of Planning and Landscape Architecture; B.A., Rhodes University (South Africa); M.L.A., University of California, Berkeley; Ph.D., University of Massachusetts, Amherst

Crittenden, John C. (2004), Richard Snell Presidential Chair Professor; B.S.E., M.S.E., Ph.D., University of Michigan, Ann Arbor

Crittenden, W. Jackson (1988), Associate Professor of Political Science; B.A., Tufts University; M.Ed., Harvard University; D.Phil., University of Oxford (United Kingdom)

Crocker, Nancy (1996), Academic Associate, Division of Undergraduate Academic Services; Assistant Director, Science and Math Outreach; B.A., M.A., Ph.D., Michigan State University

Croft, Lee B. (1973), Professor of Russian; B.S., Arizona State University; M.A., University of Arizona; Ph.D., Cornell University

Cronin, John R. (1966), Professor Emeritus of Chemistry and Biochemistry; B.A., College of Wooster; Ph.D., University of Colorado

Cronkite, Walter (1986), Professor of Journalism and Mass Communication

Cross, James (1986), Adjunct Professor of Art; B.A., University of California, Los Angeles

Crouch, Peter E. (1985), Professor of Electrical Engineering; Dean, Ira A. Fulton School of Engineering; B.S., M.S., University of Warwick (United Kingdom); Ph.D., Harvard University

Crow, Michael M. (2002), Professor of Public Affairs; President, Arizona State University; B.A., Iowa State University; Ph.D., Syracuse University

Crowder, Troy F. (1970), Professor Emeritus of Journalism and Mass Communication; B.A., University of South Dakota; M.A., University of Iowa

Crowe, Barbara J. (1981), Professor of Music; Director, Music Therapy; B.M., M.M., Michigan State University

Crowley, Sharon (1998), Professor of English; B.A., M.A., University of Nebraska, Lincoln; Ph.D., University of Northern Colorado

Crozier, Peter A. (1987), Senior Research Scientist, Center for Solid State Science; B.Sc., Ph.D., University of Glasgow (United Kingdom)

Cruz, Rhodora (2001), Faculty Associate of Nursing; B.S.N., Georgia Southwestern State University; M.S.N., University of Phoenix

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Cutler, Lorraine M. (1991), Associate Professor of Design; Associate Dean, College of Architecture and Environmental Design; B.A., B.F.A., Arizona State University; M.A., University of Phoenix

Cvorovic, Jelena (2002), Adjunct Professor of Anthropology; B.A., M.A., Belgrade University of Philosophy (Serbia); Ph.D., Arizona State University

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- Daane, Calvin J.** (1963), Professor Emeritus of Counselor Education; B.S., University of Wisconsin, Madison; M.A., Columbia University; Ed.D., Indiana University, Bloomington
- Dagger, Richard K.** (1976), Professor of Political Science; B.A., University of Missouri, St. Louis; Ph.D., University of Minnesota, Twin Cities
- Dahl, Jeannine** (1989), Professor Emerita of Nursing; B.S., University of Kansas; M.A., Ed.D., University of Northern Colorado
- Dahl, Richard C.** (1966), Professor Emeritus of Law; B.A., B.L.S., University of California, Berkeley; J.D., Catholic University of America
- Daley, J. Michael** (1978), Professor Emeritus of Social Work; B.S., Spring Hill College; M.S.W., Saint Louis University; M.S., University of Pittsburgh; Ph.D., Tulane University
- Dalgleish, Donald D.** (1962), Professor Emeritus of Military Science; B.A., Carleton College; M.A., Columbia University; Ph.D., University of Colorado
- Dallyn, Selwyn L.** (1983), Clinical Professor of Law; B.A., Graceland College; J.D., University of Iowa
- Dalton, Kevin Andrew** (1994), Senior Lecturer of the Barrett Honors College; B.A., Columbia University; M.Phil., University of Oxford (United Kingdom); Ph.D., University of Virginia
- Damrel, David W.** (2000), Assistant Professor of Religious Studies; B.A., B.J., M.A., University of Texas, Austin; Ph.D., Duke University
- Dandekar, Hemalata** (2002), Professor of Planning and Landscape Architecture; Director, School of Planning and Landscape Architecture; B.Arch., University of Bombay (India); M.Arch., University of Michigan; Ph.D., University of California, Los Angeles
- Daniel, Norman E.** (1970), Professor Emeritus of Supply Chain Management; B.S., M.S., University of Tennessee, Knoxville; Ph.D., Indiana University
- Dantico, Marilyn** (1981), Associate Professor of Political Science; B.A., University of Illinois; M.A., Ph.D., Florida State University
- Danzig, Arnold B.** (2001), Associate Professor of Educational Leadership and Policy Studies; B.A., State University of New York; M.A., Ph.D., University of Maryland
- Darling, J. Andrew** (2001), Adjunct Professor of Anthropology; B.A., Swarthmore College; M.A., Ph.D., University of Michigan
- Darst, Paul W.** (1976), Professor of Kinesiology; B.S., M.S., University of Akron; Ph.D., Ohio State University
- Dasgupta, Partha** (1991), Associate Professor of Computer Science and Engineering; B.Tech., M.Tech., Indian Institute of Technology (India); Ph.D., State University of New York, Stony Brook
- Datta, Manjira** (1995), Associate Professor of Economics; B.A., M.A., Jadavpur University (India); Ph.D., Cornell University
- Dauber, M. Robert** (1990), Clinical Professor of Law; B.A., University of California, Berkeley; J.D., Arizona State University
- Dauten, Joel J.** (1960), Professor Emeritus of Finance; B.S., M.S., Washington University; Ph.D., University of Iowa
- Davey, William G.** (1976), Associate Professor of Communication; Director, International Programs; B.A., Pennsylvania State University; M.A., Columbia University; Ph.D., Indiana University, Bloomington
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- Davidson, Elizabeth T.** (1986), Research Professor of Life Sciences; B.S., Mount Union College; M.S., Ph.D., Ohio State University
- Davidson, Joseph K.** (1973), Professor of Engineering; B.M.E., M.Sc., Ph.D., Ohio State University
- Davila, Eduardo** (1998), Lecturer of Management; B.S., University of Illinois, Urbana-Champaign; M.B.A., Arizona State University
- Davis, Frank S.** (1978), Senior Research Professional of Chemistry and Biochemistry; B.S.E., Arizona State University
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- Davis, Joseph M.** (1975), Associate Professor of Real Estate; B.S., University of South Carolina; M.B.A., Texas A&M University; Ph.D., University of Georgia
- Davis, Kirsten** (2001), Legal Writing Instructor; B.A., J.D., Ohio State University
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- Deal, Clarice** (1996), Instructor of Portuguese; B.A., Saint Marese Organization of Education and Culture, São Paulo (Brazil); M.Ed., Arizona State University
- Dean, Arthur G.** (1971), Professor Emeritus of Industrial Engineering; B.A., M.S., Texas Tech University; Ph.D., Texas A&M University
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- Doherty, Brian** (2002), Associate Librarian; Head, Music Library; B.A., Westminster Choir College; M.A., M.L.S., Rutgers, The State University of New Jersey, New Brunswick
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Duncan, Anne (2001), Assistant Professor of Interdisciplinary Humanities and Women's Studies; B.A., Swarthmore College; M.A., Ph.D., University of Pennsylvania

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Duvernay, Jennifer (2000), Assistant Librarian, Noble Science Reference Services; B.S., Carroll College; M.L.S., University of North Carolina, Chapel Hill

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Ellin, Nan (1998). Associate Professor of Architecture; B.A., Bryn Mawr College; M.A., Ph.D., Columbia University

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Fessenden, Tracy (1994), Associate Professor of Religious Studies; B.A., Yale University; Ph.D., University of Virginia

Fewell, Jennifer H. (1993), Associate Professor of Life Sciences; B.A., Cornell University; M.A., Ph.D., University of Colorado

Fidel, Noel (2002), Professor of Law; Associate Dean, College of Law; A.B., Dartmouth College; J.D., Harvard University; L.L.M., University of Virginia School of Law

Figueira-McDonough, Josephina (1990), Professor Emerita of Justice Studies and Social Work; B.S., University of Lisbon (Portugal); M.S.W., Ph.D., University of Michigan

Finch, A. Joyce (1965), Professor Emerita of Nursing; B.S.N., Augustana College; M.S., University of Colorado; Ph.D., University of Texas, Austin

Findler, Nicholas V. (1982), Professor Emeritus of Computer Science and Engineering; B.Eng., Ph.D., Budapest University for Technical Sciences (Hungary)

Fine, Robert (1997), Senior Lecturer of Sociology; B.A., Boston University; M.A., University of Chicago; Ph.D., New York University

Finer, Neal (1977), Professor Emeritus of Curriculum and Instruction; B.A., University of Houston; M.A., University of the Americas (Mexico); Ph.D., University of Texas, Austin

Fink, Jonathan (1982), Professor of Geological Sciences; Vice President for Research and Economic Affairs; B.A., Colby College; Ph.D., Stanford University

Fiori, Christine (2001), Assistant Professor of Construction; B.S., M.S., Ph.D., Drexel University

Firestone, Melvin M. (1968), Professor Emeritus of Anthropology; B.A., University of New Mexico; M.A., Ph.D., University of Washington

Fischman, Gustavo E. (1999), Assistant Professor of Curriculum and Instruction; B.A., University of Buenos Aires (Argentina); M.A., Ph.D., University of California, Los Angeles

Fish Ewan, Rebecca (1994), Associate Professor of Planning and Landscape Architecture; B.A., M.L.A., University of California, Berkeley

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Fisher, Marvin M. (1958). Professor Emeritus of English; A.B., A.M., Wayne University; Ph.D., University of Minnesota, Twin Cities

Fisher, Stuart G. (1976). Professor of Life Sciences; B.S., M.A., Wake Forest College; Ph.D., Dartmouth College

Fisk, R. Leighton (1979). Adjunct Professor of Bioengineering; B.S., M.S., Ph.D., University of Alberta (Canada)

Fitch, Frank W. (1997). Adjunct Professor of Life Sciences; M.S., M.D., Ph.D., University of Chicago

Fitch, Gregory W. (1974). Professor of Philosophy; B.A., Western Washington State College; M.A., Ph.D., University of Massachusetts, Amherst

Fitzgerald, Mary (1998). Assistant Professor of Dance; B.A., University of Maine; M.F.A., Arizona State University

Flaherty, Richard E. (1978). Professor Emeritus of Accountancy; B.S., M.S., Ph.D., University of Kansas; C.P.A., Kansas

Fleming, Robert C. (1974). Professor Emeritus of Music; Director Emeritus, Sun Devil Marching Band; B.S., Indiana University of Pennsylvania; M.F.A., Carnegie Mellon University; Ph.D., Southern Illinois University, Carbondale

Fleury, Julie (2001). Hanner Professor of Nursing; B.S.N., Northern Arizona University; M.S., Ph.D., University of Arizona

Flores, Alfinio (1992). Professor of Curriculum and Instruction; B.S., M.S., National University of Mexico; Ph.D., Ohio State University

Florschuetz, Leon W. (1964). Professor Emeritus of Engineering; B.S., M.S., Ph.D., University of Illinois

Floyd, Kory (2000). Associate Professor of Communication; B.A., Western Washington University; M.A., University of Washington; Ph.D., University of Arizona

Flys, Michael (1975). Professor Emeritus of Spanish; Licenciado en Filosofía y Letras, Doctor en Filosofía y Letras, University of Madrid (Spain)

Foard, Fumiko (1990). Senior Lecturer of Japanese; B.A., Keio Gijuku University (Japan); M.A., Arizona State University

Foard, James (1977). Professor of Religious Studies; B.A., College of Wooster; M.A., Ph.D., Stanford University

Foote, Joe S. (2000). Professor of Journalism and Mass Communication; B.A., M.A., University of Oklahoma; Ph.D., University of Texas, Austin

Forsyth, Ben R. (1992). Professor Emeritus of Health Administration and Policy; M.D., New York University



Foster, David William
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Regents' Professor of Languages and Literatures;
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Foster, Joyce (1972). Professor Emerita of Life Sciences; B.A., M.A., DePauw University; Ph.D., Arizona State University

Foster, Michael S. (2001). Adjunct Professor of Anthropology; B.A., Colorado State University; M.A., Ph.D., University of Colorado, Boulder

Fouch, Matthew (2001). Assistant Professor of Geological Sciences; B.A., Pomona College; Sc.M., Ph.D., Brown University

Fouquette, Martin J. Jr. (1965). Associate Professor of Life Sciences; B.A., M.A., Ph.D., University of Texas, Austin

Fowler, John W. (1995). Professor of Industrial Engineering; B.S., M.S., Ph.D., Texas A&M University

Fox, Cora V. (2001). Assistant Professor of English and Women's Studies; B.A., Grinnell College; M.A., Ph.D., University of Wisconsin, Madison

Fox, Peter (1990). Professor of Civil and Environmental Engineering; B.S., M.S., Ph.D., University of Illinois

Fox, Steven, MSG (2000). Instructor of Military Science; A.A., Central Texas College

Francisco, Wilson A. (1999). Assistant Professor of Chemistry and Biochemistry; B.S., University of Puerto Rico; Ph.D., Texas A&M University

Frasch, Wayne D. (1989). Professor of Life Sciences; B.A., Hope College; Ph.D., University of Kentucky

Freeman, Donald J. (1989). Professor Emeritus of Education; B.A., Grinnell College; M.A., Ph.D., Michigan State University

Freeman, Sandee (1990). Academic Associate, Division of Undergraduate Academic Services; Academic Advisor; B.S., M.F.A., Arizona State University

French, Peter A. (2000). Professor of Philosophy; Director, Lincoln Center for Applied Ethics; B.A., Gettysburg College; M.A., University of Southern California, Los Angeles; Ph.D., University of Miami, Coral Gables

Freund, John E. (1957). Professor Emeritus of Mathematics and Statistics; B.A., M.A., University of California, Los Angeles; Ph.D., University of Pittsburgh

Fritzemeyer, Joseph R. (1973). Professor Emeritus of Accountancy; B.B.A., Baylor University; M.B.A., D.B.A., Indiana University; C.P.A., Texas

Fromme, Petra (2002). Professor of Chemistry and Biochemistry; M.S., Free University of Berlin (Germany); Ph.D., Technical University of Berlin (Germany)

Fronske, Jeanne (1975). Professor of Art; B.A., B.F.A., DePauw University; M.F.A., Ohio State University, Newark

Frost, Melvin Jesse (1965). Professor Emeritus of Geography; B.S., Arizona State University; M.S., Brigham Young University; Ph.D., University of Florida

Frost, Michael D. (1995). Faculty Associate of Construction; B.S., M.S., Arizona State University

Fry, Harold (1958). Professor Emeritus of Engineering; B.S., Colorado State University; M.E., University of Wyoming; M.S., University of Colorado

Fry, Warren D. (1974). Learning Resources Specialist Emeritus; B.A., University of Northern Iowa; M.A., Arizona State University

Fuchs, Jacob (1951). Professor of Chemistry and Biochemistry; B.A., New York University; M.S., Ph.D., University of Illinois

Fuchs, Rachel G. (1983). Professor of History; B.A., M.A., Boston University; Ph.D., Indiana University

Fulginiti, Laura C. (1998). Adjunct Professor of Anthropology; B.A., Colorado College; M.A., Ph.D., University of Arizona

Fullerton, Bill J. (1958). Professor Emeritus of Education; B.S., Northwestern Oklahoma State College; M.A., Ed.D., University of Oklahoma

Fullinwider, S. Pendleton (1967). Professor Emeritus of History; B.S., United States Naval Academy; M.S., Ph.D., University of Wisconsin, Madison

Furnish, Dale Beck (1970). Professor Emeritus of Law; A.B., Grinnell College; J.D., University of Iowa; LL.M., University of Michigan

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Furr-Soloman, Connie (2001), Associate Professor of Theatre; B.A., University of North Carolina, Charlotte; M.F.A., University of Tennessee, Knoxville

Fuse, Montye (1997), Assistant Professor of English; B.A., California State University, Long Beach; M.A., Ph.D., University of California, Berkeley

G

Gaffney, Philip D. (1957), Professor Emeritus of Education; B.S., Northern Illinois State University; M.A., Ph.D., State University of Iowa

Gager, Constance T. (2003), Assistant Professor of Family and Human Development; B.A., Clark University; M.A., University of Vermont; Ph.D., University of Pennsylvania

Gaines, Sylvia W. (1972), Professor Emerita of Anthropology; B.A., M.A., Ph.D., Arizona State University

Gale, Betty J. (1982), Professor Emerita of Nursing; B.S.N., M.S., Arizona State University; D.N.Sc., University of San Diego

Galician, Mary-Lou (1983), Associate Professor of Journalism and Mass Communication; B.A., Long Island University, Brooklyn; M.S., Syracuse University; Ed.D., Memphis State University

Gallinger, George W. (1977), Associate Professor of Finance; B.A., Waterloo Lutheran University (Canada); M.B.A., York University (Canada); Ph.D., Purdue University

Gammage, Grady Jr. (1990), Faculty Associate of Planning and Landscape Architecture; B.A., Occidental College; J.D., Stanford University

Gannod, Gerald C. (1998), Assistant Professor of Computer Science and Engineering; B.Sc., M.Sc., Ph.D., Michigan State University

Garcia, Antonio A. (1989), Associate Professor of Bioengineering; B.S., Rutgers, The State University of New Jersey; Ph.D., University of California, Berkeley

García, Eugene E. (2002), Professor of Curriculum and Instruction; Vice President for University-School Partnerships and Dean, College of Education; B.S., University of Utah; M.A., Ph.D., University of Kansas

Garcia, Heidi (2000), Lecturer of Spanish; B.A., University of Puerto Rico; M.A., Arizona State University

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Gardner, Carl L. (1994), Professor of Mathematics and Statistics; B.A., Duke University; Ph.D., Massachusetts Institute of Technology

Garnero, Edward (1999), Assistant Professor of Geological Sciences; A.B., University of California, Berkeley; Ph.D., California Institute of Technology

Garrison, Eleanor (1973), Professor Emerita of Nursing; B.S.N., M.S.N., Wayne State University

Garrity, Marjorie L. (1975), Professor Emerita of Nursing; B.S., University of Bridgeport; M.S., Case Western Reserve University

Gasowski, Ronald Edward (1971), Professor Emeritus of Art; B.S.D., University of Michigan; M.F.A., University of Washington

Gavrilos, Dina (2003), Assistant Professor of Journalism and Mass Communication; B.A., University of Illinois, Chicago; M.A., University of Kentucky; Ph.D., University of Iowa

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Gel, Esma S. (2000), Assistant Professor of Industrial Engineering; B.S., Orta Dogu Technical University (Turkey); M.S., Ph.D., Northwestern University

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Gentrup, William F. (1991), Associate Research Administrator, Arizona Center for Medieval and Renaissance Studies; B.A., M.A., Ph.D., Arizona State University

George, Lisa (1999), Assistant Professor of Classics; B.A., Vassar College; M.A., Bryn Mawr College; M.A., San Francisco State University; Ph.D., Bryn Mawr College

Gerber, Leah R. (2001), Assistant Professor of Life Sciences; B.S., Mills College; M.M.A., Ph.D., University of Washington

Gerdes, Karen E. (1995), Associate Professor of Social Work; B.S., Florida State University; M.S.W., Brigham Young University; Ph.D., Florida State University

Gereboff, Joel D. (1978), Associate Professor of Religious Studies; Chair, Department of Religious Studies; B.A., New York University; Ph.D., Brown University

Gerlach, Vernon S. (1963), Professor Emeritus of Education; B.A., Wayne State University; M.A., University of Minnesota, Twin Cities; Ed.D., Arizona State University

Gharavi, Lance (2001), Assistant Professor of Theatre; B.F.A., Drake University; M.A., Ph.D., University of Kansas, Lawrence

Ghirlanda, Giovanna (2002), Assistant Professor of Chemistry and Biochemistry; Laurea, Ph.D., University of Padua (Italy)

Giard, Jacques (1998), Professor of Design; Director, School of Design; Dip.Des., IAA, Montreal (Canada); H.Dip.Des., Birmingham Polytechnic (United Kingdom); Ph.D., Concordia University (Canada)

Gibbs, W.R. (1987), Adjunct Professor of Physics and Astronomy; B.S., M.A., University of Texas; Ph.D., Rice University

Gibney, John (1992), Adjunct Professor of Bioengineering; B.S., St. Peter's College; M.D., New Jersey College of Medicine

Gieschen, Donald W. (1959), Professor Emeritus of Philosophy; B.S., Northwestern University; M.A., Ph.D., University of Minnesota, Twin Cities

Giffin, Frederick C. (1967), Professor Emeritus of History; B.A., Denison University; M.A., Ph.D., Emory University

Gilfillan, Daniel D. (2002), Assistant Professor of German; B.A., M.A., University of Vermont; Ph.D., University of Oregon

Gill, George A. (1966), Professor Emeritus of Education; B.S., M.A., Arizona State University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Gillingwater, Denis (1973). Professor of Art; B.F.A., M.F.A., University of Cincinnati

Giner, Oscar (1998). Professor of Theatre; B.A., M.F.A., D.F.A., Yale University

Ginsburg, Shai (2001). Assistant Professor of Hebrew; B.A., M.A., Hebrew University (Israel); Ph.D., University of Michigan

Gisolo, Margaret (1954). Professor Emerita of Dance; B.S., Indiana State University, Terre Haute; M.A., New York University



Glass, Gene V
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Regents' Professor of Educational Leadership and Policy Studies and Psychology in Education; Academic Program Coordinator, Educational Leadership and Policy Studies; B.A., University of Nebraska; M.S., Ph.D., University of Wisconsin

Glau, Gregory R. (1994). Associate Instructional Professional of English; Director, Writing Programs; B.A., University of Arizona; M.A., Northern Arizona University; Ph.D., University of Arizona

Glaunsinger, William S. (1972). Professor Emeritus of Chemistry and Biochemistry; B.S., Miami University; Ph.D., Cornell University

Glessner-Calkins, Beth A. (1995). Academic Associate of Languages and Literatures; Undergraduate Academic Advisor; B.A., Grove City College; M.A., Ph.D., Pennsylvania State University

Glick, Jennifer E. (2000). Assistant Professor of Sociology; B.A., Pennsylvania State University; M.A., Ph.D., University of Texas, Austin

Glick, Milton D. (1991). Professor of Chemistry and Biochemistry; Executive Vice President and Provost of the University; A.B., Augusta College; Ph.D., University of Wisconsin, Madison

Glick, Paul C. (1982). Adjunct Professor of Sociology; B.A., DePauw University; M.A., Ph.D., University of Wisconsin, Madison

Glick, William H. (1995). Professor of Management; Chair, Department of Management; A.B., University of Michigan; Ph.D., University of California, Berkeley

Glidden-Tracey, Cynthia (1999). Clinical Assistant Professor of Psychology in Education; A.B., A.M., Ph.D., University of Illinois

Gober, Patricia A. (1975). Professor of Geography; B.S., University of Wisconsin, Whitewater; M.A., Ph.D., Ohio State University

Godfrey, Donald G. (1988). Professor of Journalism and Mass Communication; B.S., Weber State College; M.S., University of Oregon; Ph.D., University of Washington

Goggin, Maureen Daly (1994). Associate Professor of English; B.S., M.A., Northeastern University; Ph.D., Carnegie Mellon University

Goggin, Peter N. (2000). Assistant Professor of English; B.S., M.A., Northeastern University; Ph.D., Indiana University of Pennsylvania

Goldberg, Beckian Fritz (1990). Professor of English; B.A., M.A., Arizona State University; M.F.A., Vermont College

Goldinger, Stephen D. (1992). Associate Professor of Psychology; B.A., Ph.D., Indiana University, Bloomington

Goldman, Donald (2001). Senior Lecturer of Accountancy; B.S., Arizona State University; B.A., University of Illinois

Goldstein, Elliott S. (1974). Associate Professor of Life Sciences; B.S., University of Hartford; M.S., Ph.D., University of Minnesota, Twin Cities

Goldstein, Tom (2003). Professor of Journalism and Mass Communication; Frank Russell Chair of Business and Journalism; B.A., Yale College; M.S., J.D., Columbia University

Golen, Steven P. (1984). Associate Professor of Accountancy; B.S., M.A., Western Kentucky University; Ph.D., Arizona State University

Golshani, Forouzan (1984). Professor of Computer Science and Engineering; B.S., Arya Mehr University of Technology (Iran); M.S., Ph.D., University of Warwick (United Kingdom)

Gomez, Reynaldo A. (1980). Associate Professor of Curriculum and Instruction; B.A., Southwest Texas State University; M.Ed., Stephen F. Austin State University; Ph.D., Pennsylvania State University



Gomez-Mejia, Luis R.
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Regents' Professor of Management; B.A., M.A., Ph.D., University of Minnesota, Twin Cities

Gonzales, Nancy A. (1992). Associate Professor of Psychology; B.S., Arizona State University; M.S., Ph.D., University of Washington

González, Josué M. (1998). Professor of Educational Leadership and Policy Studies; Director, Southwest Center for Education Equity and Language Diversity; B.A., M.A., Texas A&I University, Kingsville; Ed.D., University of Massachusetts, Amherst

Gonzalez-Santin, Edwin (1979). Senior Instructional Professional of Social Work; B.A., Cameron State College; M.S.W., Arizona State University

Go, Benjamin (1955). Professor Emeritus of Art; B.F.A., University of Iowa; M.F.A., Cranbrook Academy of Art

Gooding, Elmer R. (1967). Professor Emeritus of Economics; B.S., McPherson College; M.A., Ph.D., University of Kansas

Goodnick, Stephen M. (1996). Professor of Electrical Engineering; Chair, Department of Electrical Engineering; B.S., Trinity University; M.S., Ph.D., Colorado State University

Gordon, Leonard (1967). Professor Emeritus of Sociology; B.A., Wayne State University; M.A., University of Michigan; Ph.D., Wayne State University

Gordon, Rena J. (1983). Adjunct Professor of Geography; B.S., Wayne State University; M.A., Ph.D., Arizona State University

Goren, Paul (2001). Assistant Professor of Political Science; B.S., Carnegie Mellon University; M.A., Ph.D., University of Pittsburgh

Gorin, Joanna S. (2002). Assistant Professor of Psychology in Education; B.A., University of California, Los Angeles; M.A., University of Texas, Austin; Ph.D., University of Kansas

Gorman, Robert (2001). Professor of Law; A.B., LL.B., Harvard University

Gorur, Ravi S. (1987). Professor of Electrical Engineering; B.S., Bangalore University (India); M.S., Indian Institute of Science (India); Ph.D., University of Windsor (Canada)

Goul, Kenneth Michael (1985). Professor of Computer Information Systems; B.S., M.B.A., Ph.D., Oregon State University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Gould, Ian R. (1998). Assistant Professor of Chemistry and Biochemistry; B.S., Ph.D., University of Manchester (United Kingdom)

Gourley, David R. (1967). Professor Emeritus of Marketing; B.S., Miami University; M.B.A., University of Toledo; D.B.A., Indiana University

Goyer, Robert S. (1981). Professor Emeritus of Communication; B.A., DePauw University; M.A., Miami University; Ph.D., Ohio State University

Grace, Edward E. (1963). Professor Emeritus of Mathematics and Statistics; B.S., Ph.D., University of North Carolina



Graf, William L. (1978)
Regents' Professor Emeritus of Geography; B.A., M.Sc., Ph.D., University of Wisconsin, Madison

Gratton, Brian J. (1983). Professor of History; B.A., University of New Mexico; Ph.D., Boston University

Gray, Shelley (2001). Assistant Professor of Speech and Hearing Science; B.S., M.S., Ph.D., University of Arizona

Gray, Susan E. (1991). Associate Professor of History; A.B., Earlham College; M.A., Ph.D., University of Chicago

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Regents' Professor of Geological Sciences; B.S., M.S., Mississippi State University; Ph.D., University of Missouri, Rolla

Green, James L. (1967). Professor Emeritus of English; B.A., M.A., University of Kansas; Ph.D., University of Nevada, Reno

Green, Jennifer L. (1991). Adjunct Professor of Chemistry and Biochemistry; B.Sc., Ph.D., University of Sydney (Australia)

Green, Mary E. (1967). Professor Emerita of English; B.A., Queens College; M.A., Saint John's University; Ph.D., University of Chicago

Green, Monica (2002). Professor of History; B.A., Barnard College; M.A., Ph.D., Princeton University

Green, Samuel B. (2000). Professor of Educational Psychology; Academic Program Leader, Educational Psychology; B.A., West Virginia University; M.S., Marquette University; Ph.D., University of Georgia

Greenberg, Edward A. (1996). Associate Research Scientist for Nursing; B.A., University of California, Los Angeles; Ph.D., Arizona State University

Greeneich, Edwin W. (1982). Professor Emeritus of Electrical Engineering; B.S.E.E., M.S.E.E., Ph.D., University of California, Berkeley

Greensfelder, Kirk B. (2001). Assistant Professor of Aerospace Studies; Assistant Department Head, Department of Aerospace Studies; B.S., Miami University; M.B.A., University of South Dakota; M.S., Golden Gate University

Greenspan, Ruth L. (1997). Adjunct Professor of Anthropology; B.A., Carleton College; M.A., Ph.D., University of Oregon

Greives, Thomas L. (1997). Associate Librarian, Hayden Reference Services; B.A., Purdue University; M.A., University of Southern California; M.L.S., Indiana University; A.B.D., University of Chicago

Grey, Betsy J. (1987). Professor of Law; B.A., Barnard College; J.D., Georgetown University

Grier, Marvin (1957). Professor Emeritus of Kinesiology; B.A., Wisconsin State College, La Crosse; M.A., New York University

Gries, Corinna (1998). Academic Associate, CAP LTER Ecological Data Coordinator, Center for Environmental Studies; M.S., Ph.D., Christian Albrechts University (Germany)

Griffin, William A. (1988). Professor of Family and Human Development; B.A., Auburn University; M.S., Virginia Polytechnic and State University; Ph.D., Texas Tech University

Griffith, LeRoy H. (1958). Professor Emeritus of Education; B.S., M.S., Drake University; Ph.D., University of Iowa

Grigsby, J. Eugene (1966). Professor Emeritus of Art; A.B., Morehouse College; M.A., Ohio State University; Ph.D., New York University

Grimm, Nancy B. (1990). Professor of Life Sciences; B.A., Hampshire College; M.S., Ph.D., Arizona State University

Grinder, Robert E. (1973). Professor Emeritus of Education; B.S., University of California, Berkeley; Ed.D., Harvard University

Grobe, Edwin P. (1957). Professor Emeritus of French; A.B., William Jewell College; M.A., Ph.D., Indiana University, Bloomington

Grondin, Robert O. (1983). Associate Professor of Electrical Engineering; Director, Student Academic Services, Ira A. Fulton School of Engineering; B.S., M.S., Ph.D., University of Michigan

Gross, Douglas R. (1968). Professor Emeritus of Counselor Education; B.A., M.A., Western Michigan University; Ph.D., University of Wisconsin, Madison

Grossman, Louis H. (1966). Professor Emeritus of Management; B.A., University of Michigan; M.B.A., Ph.D., Michigan State University

Gover, Kevin (2003). Professor of Law; A.B., Princeton University; J.D., University of New Mexico

Groy, Thomas L. (1983). Associate Research Professional of Chemistry and Biochemistry; B.S., Adams State College; Ph.D., Arizona State University

Gruzinska, Aleksandra (1973). Assistant Professor of French; B.A., M.A., State University of New York, Buffalo; Ph.D., Pennsylvania State University

Gryder, Robert (1959–63; 1964). Professor of Curriculum and Instruction; B.A., Northwestern State University; M.Ed., Louisiana State University; Ed.D., University of North Dakota

Guerin, Sanford M. (1984). Professor of Law; B.S., Boston University; J.D., University of San Francisco; LL.M., New York University

Guerrero, Laura (1996). Professor of Communication; B.A., M.A., San Diego State University; Ph.D., University of Arizona

Guhathakurta, Subhrajit (1994). Associate Professor of Planning and Landscape Architecture; B.Arch., Jadavpur University (India); M.C.R.P., Iowa State University; Ph.D., University of California, Berkeley

Guilbeau, Eric J. (1977). Olin Endowed Professor of Bioengineering; Chair, Harrington Department of Bioengineering; B.S., M.S., Ph.D., Louisiana Tech University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Guinouard, Donald E. (1966), Professor Emeritus of Counselor Education; B.S., M.S., Montana State College; Ed.D., Washington State University

Guleserian, Theodore (1971), Associate Professor of Philosophy; B.A., University of California, Riverside; Ph.D., Yale University

Gullett, Gayle (1993), Associate Professor of History; B.A., M.A., Loma Linda University; Ph.D., University of California, Riverside

Gully, Anthony Lacy (1972), Associate Professor of Art; B.A., University of California, Riverside; M.A., University of California, Berkeley; Ph.D., Stanford University

Guntermann, Gail (1977), Professor Emerita of Spanish; B.S., University of Montana; M.A., University of New Mexico; Ph.D., Ohio State University

Guntermann, Karl L. (1982), Professor of Real Estate; A.B., Knox College; M.B.A., D.B.A., Indiana University

Guo, Chao (2002), Assistant Professor of Recreation Management and Tourism; B.A., M.A., Renmin University of China; Ph.D., University of Southern California

Gupta, Sandeep Kumar (2001), Associate Professor of Computer Science and Engineering; B.Tech, Banaras Hindu University (India); M.Tech, Indian Institute of Technology (India); M.S., Ph.D., Ohio State University

Gupta, Sanjay (1990), Professor of Accountancy; B.Com., Bombay University (India); B.Laws, Calcutta University (India); M.S.A., Bowling Green State University; Ph.D., Michigan State University; C.P.A., Ohio

Gust, J. Devens (1975), Professor of Chemistry and Biochemistry; B.S., Stanford University; M.S., Ph.D., Princeton University

Gust, Tracey (2002), Lecturer of Mathematics and Statistics; B.S., Abilene Christian University; M.S., Arizona State University

Gustavsson, Nora S. (1994), Associate Professor of Social Work; A.B., M.S.W., City University of New York; Ph.D., University of Southern California

Guthrie, David W. Col. (2003), Professor of Aerospace Studies; Chair, Department of Aerospace Studies; B.S., Bemidji State University; M.S., Troy State University

Gutiérrez, Guadalupe (1999), Assistant Professor of Chicana and Chicano Studies; B.S., California State University, Northridge; M.A., Ph.D., University of Michigan, Ann Arbor

Gutierrez, Nancy A. (1985), Professor of English; Vice Provost; B.A., Denison University; M.A., Ph.D., University of Chicago

Guzzetti, Barbara J. (1988), Professor of Curriculum and Instruction; B.S., M.S., Northern Illinois University; Ph.D., University of Colorado

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Hadley, Neil F. (1966), Professor Emeritus of Life Sciences; B.A., Eastern Michigan University; Ph.D., University of Colorado

Haefler, J. Richard (1976), Associate Professor of Music; B.M., Ohio State University; M.M., University of Arizona; Ph.D., University of Illinois

Haenn, Nora M. (1999), Assistant Professor of Anthropology; B.A., Fordham University; M.A., Ph.D., Indiana University, Bloomington

Haessler, Alice M. (1997), Adjunct Professor of Anthropology; B.A., University of Pennsylvania; M.A., Ph.D., Arizona State University

Haggerson, Nelson L. (1961–63; 1964), Professor Emeritus of Curriculum and Instruction; B.A., Vanderbilt University; M.S., New Mexico Western College, Silver City; Ph.D., Claremont Graduate School

Hagler, Debra (1996), Clinical Associate Professor of Nursing; B.S.N., New Mexico State University; M.S., University of Arizona

Hajicek, James (1976), Professor of Art; B.F.A., Kansas City Art Institute; M.F.A., University of New Mexico

Hakac, John (1966), Professor Emeritus of English; A.B., Centre College; M.A., Ph.D., University of Texas, Austin

Haley, Arthur J. (1976), Professor Emeritus of Recreation Management and Tourism; B.A., Stonehill College; M.Ed., Springfield College; Ph.D., Texas A&M University

Hall, John S. (1973), Professor of Public Affairs; B.A., M.A., San Diego State University; Ph.D., University of Oregon

Halverson, Roy K. (1988), Professor Emeritus of Journalism and Mass Communication; B.S., M.S., University of Wisconsin, Madison; Ph.D., University of Illinois

Hamilton, Robert (1980), Professor of Music; B.M., Indiana University, Bloomington; M.M., Catholic University of America

Hammond, Philip C. (1996), Adjunct Professor of Anthropology; B.A., Drew University; M.A., Ph.D., Yale University

Hanish, Laura (1997), Associate Professor of Family and Human Development; B.S., Arizona State University; M.A., Ph.D., University of Illinois, Chicago

Hanna, Albert Lyle (1967), Professor Emeritus of Music; B.M., University of Cincinnati; Ph.D., Indiana University, Bloomington

Hanson, Gary (1999), Professor of Educational Leadership and Policy Studies; Academic Program Coordinator, M.Ed. in Higher and Postsecondary Education; B.A., M.A., Ph.D., University of Minnesota

Hanson, Randel D. (1999), Assistant Professor of Justice Studies; B.A., Ph.D., University of Minnesota

Hanson, Roland C. (1966), Professor Emeritus of Physics and Astronomy; B.S., Michigan College of Mining and Technology; M.S., Ph.D., University of Illinois

Happel, Stephen K. (1975), Professor of Economics; B.A., University of Missouri; M.A., Ph.D., Duke University

Hardert, Ronald A. (1966), Professor Emeritus of Sociology; A.B., M.A., University of Cincinnati; Ph.D., Indiana University, Bloomington

Hardt, Annabelle (1968), Professor Emerita of Curriculum and Instruction; B.A., Southwestern University; M.A., Cornell University; Ph.D., University of Texas, Austin

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- Haried, Andrew A.** (1969), Professor Emeritus of Accountancy; B.A., Hastings College; M.A.S., Ph.D., University of Illinois; C.P.A., Arizona, Illinois, North Carolina
- Harlan, Sharon L.** (1998), Associate Professor of Sociology; B.A., Northeastern University; M.A., Ph.D., Cornell University
- Harrington, Rodney E.** (1992), Professor Emeritus of Life Sciences; A.B., University of South Dakota; Ph.D., University of Washington
- Harris, Jerry D.** (1972), Professor Emeritus of Educational Psychology; B.S., Illinois State University; Ph.D., University of Minnesota, Twin Cities
- Harris, Joseph** (1963), Professor Emeritus of Chemistry and Biochemistry; B.S., University of Maryland; M.A., Ph.D., Johns Hopkins University
- Harris, Kathryn M.** (1965), Professor Emerita of English; B.A., M.A., Arizona State University
- Harris, Mark** (1980), Professor Emeritus of English; B.A., M.A., University of Denver; Ph.D., University of Minnesota, Twin Cities
- Harris, Walter Jr.** (1980), Professor Emeritus of Music; B.S., Knoxville College; M.M., Ph.D., University of Minnesota, Twin Cities
- Harrison, Jon F.** (1990), Professor of Life Sciences; B.S., University of Toronto (Canada); M.S., University of Pittsburgh; Ph.D., University of Colorado
- Harrison, Marsha** (2000), Lecturer of Curriculum and Instruction; B.A., M.Ed., Ph.D., Arizona State University
- Hartman, Thomas S.** (1990), Associate Professor of Architecture; D.P.L.G., Paris School of Beaux Arts (France)
- Hartnett, Hilairy** (2003), Assistant Professor of Geological Sciences; B.S., Vassar; M.S., Ph.D., University of Washington
- Hassett, Matthew J.** (1966), Professor Emeritus of Mathematics and Statistics; B.S., Fordham University; M.S., Ph.D., Rutgers, The State University of New Jersey
- Hastings, Vernon L.** (1973), Professor Emeritus of Construction; B.S.M.E., University of Nebraska; M.S.I.E., Oklahoma A&M University
- Hatfield, Mary M.** (1988), Professor Emerita of Curriculum and Instruction; B.S., M.S., Ph.D., University of Kansas
- Hayes, Colleen** (1998), Senior Lecturer of Computer Information Systems; B.S., M.B.A., Arizona State University
- Hayes, Mark** (1996), Associate Professor of Chemistry and Biochemistry; B.A., Humboldt State University; Ph.D., Pennsylvania State University
- Haygood, Robert C.** (1970), Professor Emeritus of Psychology; B.S., University of Illinois; M.S., Ph.D., University of Utah
- Haynes, Peter** (1975), Professor of Justice Studies; B.S., University of Southampton (United Kingdom); M.A., Ph.D., University of Toronto (Canada)
- Hazel, Jeffrey R.** (1975), Professor Emeritus of Life Sciences; B.A., College of Wooster; M.S., Ph.D., University of Illinois
- He, Jiping** (1994), Professor of Bioengineering; B.S., Huazhong University of Science and Technology, Wuhan (China); M.S., Ph.D., University of Maryland
- He, Leping** (2003), Assistant Librarian, Technical Services; B.A., East China Normal University; M.L.S., Emporia State University
- Head, K. Brad** (2002), Assistant Professor of Aerospace Studies; B.S., United States Air Force Academy
- Hedrick, Philip W.** (1992), Professor of Life Sciences; B.A., Hanover College; M.S., Ph.D., University of Minnesota
- Heenan, Katherine L.** (1998), Senior Lecturer of English; B.A., California State University, Chico; M.A., Ph.D., University of Connecticut, Storrs
- Hegmon, Michelle** (1995), Professor of Anthropology; B.A., University of Virginia; M.A., Ph.D., University of Michigan
- Heier, William D.** (1966), Professor Emeritus of Management; B.S., University of Maryland; M.A., George Washington University; Ph.D., American University
- Hejduk, Renata** (1999), Assistant Professor of Architecture; B.A., Barnard College; M.A., Tufts University
- Held, Peter** (2003), Associate Museum Professional; Curator; B.S., State University College, Brockport; M.A., Oregon State University
- Heller, Jules** (1976), Professor Emeritus of Art; Dean Emeritus, Herberger College of Fine Arts; B.A., Arizona State University; M.A., Columbia University; Ph.D., University of Southern California
- Helms, Loyce Randel** (1976), Professor of English; B.A., University of California, Riverside; Ph.D., University of Washington
- Helms Tillery, Stephen** (2000), Assistant Research Professor of Bioengineering; B.S., Arizona State University; Ph.D., University of Minnesota
- Helmstadter, Gerald C.** (1959), Professor Emeritus of Education; B.S., M.S., Iowa State University; Ph.D., University of Minnesota, Twin Cities
- Helton, Jon C.** (1973), Professor Emeritus of Mathematics and Statistics; B.S., Southwest Texas State College; M.A., Ph.D., University of Texas, Austin
- Hembree, Gary G.** (1986), Senior Research Scientist of Physics and Astronomy; B.A., University of California, San Diego; Ph.D., Arizona State University
- Henderson, Mark** (1984), Professor of Industrial Engineering; B.S.M.E., M.S.M.E., Ph.D., Purdue University
- Hendrick, Thomas E.** (1984), Professor Emeritus of Supply Chain Management; B.S., M.B.A., University of Washington; Ph.D., University of Oregon
- Hendrickson, Lester E.** (1968), Professor Emeritus of Materials Science and Engineering; B.S., M.S., Michigan Technological University; Ph.D., University of Illinois
- Hendrickson, Suzanne B.** (1990), Lecturer of French; B.S., M.A., Louisiana State University, Baton Rouge; Ph.D., Washington University, St. Louis
- Hendrickson, William L.** (1976), Professor Emeritus of French; B.A., Arizona State University; M.A., University of Kansas; Ph.D., Princeton University
- Henkel, Ray** (1966), Professor Emeritus of Geography; B.S., Arizona State University; M.S., Ph.D., University of Wisconsin, Madison
- Hennington, Jo Ann** (1975), Professor Emerita of Management Communication; B.A., M.B.A., Ed.D., Arizona State University
- Henry, Joseph** (1988), Professor Emeritus of Engineering; B.S., West Virginia University; M.S., Ph.D., University of Michigan
- Hepburn, John R.** (1984), Professor of Justice Studies; B.A., Butler University; M.S., University of Kentucky; Ph.D., University of Iowa
- Hepworth, Dean H.** (1990), Professor Emeritus of Social Work; B.S., M.S.W., Ph.D., University of Utah
- Herald, Cherry L.** (1973), Research Professor, Cancer Research Institute; Associate Director, Cancer Research Institute; B.S., M.S., Ph.D., Arizona State University

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Herman, George R. (1956). Professor Emeritus of English; M.A., University of Kansas

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Hermann, Ria (1986). Academic Associate, Division of Undergraduate Academic Services; Academic Advisor; B.A., B.S., M.S., Ph.D., Arizona State University

Hernandez, Armand P. (1974). Professor Emeritus of Justice Studies; B.A., M.A., San Jose State University; Ed.D., University of Southern California

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Herrendorf, Berthold (2003). Associate Professor of Economics; B.S., University of Bonn (Germany); M.A., Indiana University; Ph.D., European University Institute (Italy)

Herrera, Richard (1989). Associate Professor of Political Science; B.A., M.A., Saint Mary's University; Ph.D., University of California, Santa Barbara

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Herring, Donald E. (1999). Assistant Professor of Design; B.A., American University; B.S.D., M.S.D., Arizona State University

Herrington, Scott S. (1981). Librarian; Head, Library Instruction, Systems, and Technology (LIST); B.A., State University of New York, Plattsburgh; M.L.S., University of Tennessee; Ph.D., Arizona State University

Hershauer, James C. (1969). Professor of Management; B.S., Purdue University; M.B.A., D.B.A., Indiana University, Bloomington

Hertz, Michael G. (1987). Professor of Finance; B.A., M.B.A., M.S., University of Rochester; Ph.D., University of Oregon

Hervig, Richard L. (1981). Senior Research Scientist, Center for Solid State Science; B.S., University of Iowa; Ph.D., University of Chicago

Hestenes, David O. (1966). Professor Emeritus of Physics and Astronomy; B.A., Pacific Lutheran College; M.A., Ph.D., University of California, Los Angeles

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Regents' Professor of Electrical Engineering; Director, Center for Advanced Control of Energy and Power Systems; B.S.E.E., Cooper Union University; M.S.E.E., Ph.D., Purdue University

Heywood, William M. (1997). Adjunct Professor of Design; B.F.A., Minneapolis College of Art and Design; M.S., Arizona State University; Ph.D., Fielding Institute



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Regents' Professor of Music; B.M., University of Colorado; M.M., Wichita State University

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Higgins, Walter T. Jr. (1967). Professor Emeritus of Electrical Engineering; B.E.E., Manhattan College; M.S., Ph.D., University of Arizona

Hill, Gary W. (1999). Professor of Music; Director of Bands; B.M.E., M.M., University of Michigan

Hill, Vanessa (2002). Faculty Associate of Nursing; B.S.N., M.S., Arizona State University

Hillman, Amy (2001). Associate Professor of Management; B.A., Trinity University; M.B.A., University of the Incarnate Word; Ph.D., Texas A&M University

Hinds, David S. (2002). Assistant Professor of African American Studies; B.A., University of the District of Columbia; M.A., Ph.D., Howard University

Hinks, Robert W. (1981). Associate Professor of Civil and Environmental Engineering; B.Sc., University of Wales (United Kingdom); M.S.E., M.A., Ph.D., Princeton University

Hinrichs, Richard N. (1987). Associate Professor of Kinesiology; A.B., Oberlin College; M.A., University of Iowa; Ph.D., Pennsylvania State University

Hirleman, Edwin D. Jr. (1977). Professor Emeritus of Mechanical and Aerospace Engineering; B.S.M.E., M.S.M.E., Ph.D., Purdue University

Hiryak, Christopher D. (2000). Faculty Associate of Public Affairs; B.S.E., Lock Haven University; M.P.A., Arizona State University

Hoekstra, Valerie (2002). Assistant Professor of Political Science; B.A., California State University, Long Beach; M.A., Ph.D., State University of New York, Stony Brook

Hoffer, Warren W. (1972). Professor Emeritus of Music; B.M., M.M., University of Wisconsin, Madison

Hoffman, Dan (1999). Professor of Architecture; B.Arch., Cooper Union

Hoffman, Dennis L. (1979). Professor of Economics; Associate Dean, Graduate Programs, W. P. Carey School of Business; B.S., Grand Valley State University; M.A., Ph.D., Michigan State University

Hoffman, Steven A. (1985). Associate Professor of Life Sciences; B.A., Clark University; M.A., Ph.D., University of Colorado

Hoffmeister, J. Ronald (1983). Associate Professor of Finance; B.S., Millikin University; M.S., Ph.D., University of Illinois

Hogan, Fiona (1984). Assistant Research Professor, Cancer Research Institute; B.Sc., M.Sc., Ph.D., University College, Dublin (Ireland)

Hogan, Timothy D. (1970). Professor Emeritus of Economics; Director, Center for Business Research; Director, L. William Seidman Research Institute; A.B., University of California, Berkeley; M.A., University of California, Davis; Ph.D., Virginia Polytechnic Institute and State University

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- Hogue, Brenda** (2002), Associate Professor of Life Sciences; B.A., Mississippi University; M.Ed., Duke University; Ph.D., University of Tennessee
- Hogue, Cynthia** (2003), Maxine and Jonathan Marshall Professor of English; B.A., Oberlin College; M.A.H., State University of New York, Buffalo; Ph.D., University of Arizona
- Hokin, Jeanne** (1997), Senior Lecturer Emerita of Art; B.A., Ph.D., University of California, Santa Barbara
- Holbert, Keith E.** (1989), Associate Professor of Electrical Engineering; B.S., M.S., Ph.D., University of Tennessee
- Holbrook, Amy K.** (1975), Associate Professor of Music; B.A., M.A., Mills College; Ph.D., University of Washington
- Holle, Ronald L.** (2003), Adjunct Professor of Geography; B.S., M.S., Florida State University
- Holley, Lynn C.** (2000), Assistant Professor of Social Work; B.A., M.S.S.W., University of Tennessee, Knoxville; Ph.D., University of Washington
- Holloway, Allen Jr.** (1992), Adjunct Professor of Bioengineering; B.A., Yale University; M.D., Harvard University
- Holloway, John R.** (1969), Professor of Chemistry and Biochemistry and Geological Sciences; B.S., University of Oregon; Ph.D., Pennsylvania State University
- Holloway, Victoria** (1995), Associate Professor of Theatre; B.A., Boise State University
- Holschuh, Jane** (2000), Assistant Professor of Social Work; B.A., M.S.W., Ph.D., University of California, Berkeley
- Hom, Peter W.** (1984), Professor of Management; B.A., New York University; M.A., University of California, Berkeley; Ph.D., University of Illinois
- Homa, Donald L.** (1975), Professor of Psychology; B.S., University of Iowa; M.S., Ph.D., University of Wisconsin, Madison
- Homer, Judith** (1998), Clinical Associate Professor of Counseling Psychology and Counselor Education; Director, Counselor Training Center; B.A., M.S., Ph.D., University of Oklahoma
- Honegger, Gitta** (2001), Professor of German, Theatre, and Women's Studies; Ph.D., University of Vienna (Austria)
- Hoober, J. Kenneth** (1991), Professor Emeritus of Life Sciences; Director, Molecular Biosciences and Biotechnology Program; B.A., Goshen College; M.S., Ph.D., University of Michigan
- Hood, Stafford** (1992), Associate Professor of Counseling and Counseling Psychology; Associate Director, Division of Psychology in Education; B.A., M.S., University of Wisconsin, Whitewater; Ph.D., University of Illinois
- Hoover, Helene M.** (1957), Professor Emerita of Family and Human Development; B.S., M.S., Louisiana State University; Ed.D., Oklahoma State University
- Hope, Diane** (1997), Assistant Research Professor of Life Sciences; CAP LTER Field Project Manager, Center for Environmental Studies; B.S., University of London (United Kingdom); M.S., Ph.D., University of Aberdeen (United Kingdom)
- Hopkins, Paul T. Jr., Capt.** (2001), Assistant Professor of Military Science; B.S., Wheaton College
- Hoppensteadt, Frank C.** (1995), Professor of Mathematics and Statistics and Electrical Engineering; B.A., Butler University; M.S., Ph.D., University of Wisconsin, Madison
- Horan, Elizabeth R.** (1989), Professor of English; B.A., Barnard College; Ph.D., University of California, Santa Cruz
- Horan, John J.** (1985), Professor of Counseling Psychology and Counselor Education; A.B., M.A., University of Detroit; Ph.D., Michigan State University
- Horwath, Peter** (1973), Professor of German; Abitur, Realgymnasium, Landshut (Germany); B.A., M.A., Indiana University, Bloomington; Ph.D., University of Michigan
- Hotelling, Katsuko T.** (1991), Associate Librarian, Technical Services Department; B.A., M.A., University of North Carolina, Chapel Hill; M.A., University of Oregon
- Houston, Sandra L.** (1984), Professor of Civil and Environmental Engineering; Chair, Department of Civil and Environmental Engineering; B.S., University of Oklahoma; M.S.C.E., University of New Mexico; Ph.D., University of California, Berkeley
- Houston, William N.** (1984), Professor Emeritus of Civil and Environmental Engineering; Professional Degree in Geological Engineering, Colorado School of Mines; M.S.C.E., Ph.D., University of California, Berkeley
- Howard, Pamela** (1996), Lecturer of Speech and Hearing Science; B.A., M.A., California State University, Fresno
- Howell, Susan** (2001), Adjunct Professor of Anthropology; B.A., San Jose State University; M.A., Ph.D., Arizona State University
- Howells, Edmund G.** (1960), Professor Emeritus of Philosophy; B.A., University of Utah; M.A., University of Michigan; M.A., Middlebury College; Ph.D., Stanford University
- Hrabe, David P.** (2002), Assistant Professor of Nursing; Director, Continuing and Extended Education, College of Nursing; B.S.N., Fort Hays State University; M.S., Arizona State University; Ph.D., University of Arizona
- Hu, Qiang** (2001), Assistant Research Professor of Life Sciences; B.S., Hubei University (China); M.S., Institute of Hydrobiology, Chinese Academy of Sciences (China); Ph.D., Ben-Gurion University of the Negev (Israel)
- Hubbard, Paul G.** (1950), Professor Emeritus of History; A.B., Wabash College; M.A., Ph.D., University of Illinois
- Hubele, Norma F.** (1984), Professor of Industrial Engineering; B.S., University of Massachusetts; M.S., Ph.D., Rensselaer Polytechnic Institute
- Hudak, Thomas** (1988), Professor of Anthropology; B.A., M.A., University of Wisconsin, Madison; Ph.D., University of Michigan
- Hudelson, Sarah J.** (1989), Professor of Curriculum and Instruction; Senior Associate Dean; B.A., College of Wooster; M.A., Ph.D., University of Texas, Austin
- Huey, Ben M.** (1979), Associate Professor of Computer Science and Engineering; Associate Dean, Planning and Administration, Ira. A. Fulton School of Engineering; B.S., Harding College; M.S., Ph.D., University of Arizona
- Huff, Robert A.** (1985), Professor Emeritus of Education; B.A., University of Kansas; M.A., University of Missouri, Kansas City; Ed.D., University of Oregon
- Hui, Joseph Y.** (1999), Professor of Electrical Engineering; B.S., M.S., Ph.D., Massachusetts Institute of Technology
- Huizingh, William** (1959), Professor Emeritus of Accountancy; B.S.B.A., M.B.A., University of Denver; Ph.D., University of Michigan; C.P.A., Arizona, Colorado
- Humphrey, Ted** (1966), Barrett Professor and Professor of Philosophy; A.B., M.A., University of California, Riverside; Ph.D., University of California, San Diego

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Humphreys, Jere T. (1987). Professor of Music: B.M., University of Mississippi; M.M., Florida State University; Ph.D., University of Michigan

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Hunter, Betty A. (1966). Professor Emerita of Family and Human Development: B.S., M.Ed., University of North Carolina, Greensboro

Hunter, Gary K. (1999). Assistant Professor of Marketing: B.S., United States Military Academy; M.B.A., University of Tennessee; Ph.D., University of North Carolina

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Huntington, Virginia R. (1962). Professor Emerita of Accountancy: B.A., M.B.A., University of Kansas; Ph.D., University of Texas; C.P.A., Arizona, Missouri

Hurlbert, Glenn (1990). Associate Professor of Mathematics and Statistics; Associate Chair, Undergraduate Studies: B.S., Wake Forest University; M.Sc., State University of New York, Stony Brook; Ph.D., Rutgers, The State University of New Jersey

Husman, Jenefer (2002). Assistant Professor of Psychology in Education: B.S., Evergreen State College, Olympia; M.A., Ph.D., University of Texas, Austin

Huss, Gary (1998). Senior Research Scientist of Geological Sciences: B.A., Rice University; M.S., University of New Mexico; Ph.D., University of Minnesota

Huston, Gerald D. (1962). Professor Emeritus of Computer Information Systems: B.S.C., M.A., Ph.D., University of Iowa

Hutt, Michael D. (1982). Ford Motor Company Distinguished Professor of Marketing: B.B.A., M.B.A., Ohio University; Ph.D., Michigan State University

Hwang, Yuhchang (1995). Associate Professor of Accountancy: B.A., Fu-Jen Catholic University (Taiwan); M.S., National Cheng-Chi University (Taiwan); Ph.D., University of California, Berkeley

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Iasemidis, Leon D. (2000). Associate Professor of Bioengineering: B.S., National Technical University of Athens (Greece); M.S., Ph.D., University of Michigan

Idso, Sherwood J.B. (1984). Adjunct Professor of Geography and Life Sciences; Research Physicist, U.S.D.A. Agricultural Research Service; B.S., M.S., Ph.D., University of Minnesota

Igoe, Ann Reid (1999). Clinical Assistant Professor of Psychology in Education: B.S., Grand Canyon University; M.A., Ph.D., Arizona State University

Ihrig, Edwin (1979). Professor of Mathematics and Statistics: B.S., M.A., University of Maryland; Ph.D., University of Toronto (Canada)

Indieke, LeRoy (1968). Professor Emeritus of Accountancy: B.S., Valley City State College; M.A., University of North Dakota; Ph.D., University of Illinois; C.P.A., Illinois

Ingram, David (1998). Professor of Speech and Hearing Science; Chair, Department of Speech and Hearing Science; B.S., Georgetown University; Ph.D., Stanford University

Ingram, Kelly D. (1998). Clinical Assistant Professor of Speech and Hearing Science: B.A., University of British Columbia (Canada); M.S., Purdue University

Innes, Matthew (2001). Assistant Professor of Architecture: B.Eng., Sheffield City Polytechnic (United Kingdom); M.S., University of Cambridge (United Kingdom)

Inskeep, Gordon C. (1968). Professor Emeritus of Management: B.Ch.E., Ohio State University; Ph.D., Columbia University

Isaac, Gwyneira (2002). Assistant Professor of Anthropology: B.F.A., University of Michigan; M.P., Ph.D., Oxford University (United Kingdom)

Ismeurt, Robert L. (1989). Associate Professor of Nursing: B.S.N., Florida State University; M.S., Arizona State University; Ph.D., University of Texas, Austin

Isom, Matthew (1996). Senior Lecturer of Mathematics and Statistics; Director of First-Year Mathematics and Statistics; B.A., Humboldt State University; M.A., Ph.D., University of Northern Colorado

Itule, Bruce D. (1985). Clinical Professor of Journalism and Mass Communication: B.A., University of Arizona; M.A., University of Colorado



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(1986)

Regents' Professor of History: B.A., Carleton College; M.A., Ph.D., University of Wisconsin, Madison

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J

Jackiewicz, Elzbieta (1994). Lecturer of Mathematics and Statistics: M.Sc., University of Gdansk (Poland)

Jackiewicz, Zdzislaw (1987). Professor of Mathematics and Statistics: M.S., Technical University of Gdansk (Poland); M.S., Ph.D., University of Gdansk (Poland)

Jacks, Mary L. (1955). Professor Emerita of Supply Chain Management: B.A., M.A., Arizona State University; C.P.S., Arizona

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Jackson, Donald W. Jr. (1972). Professor of Marketing: B.A., Albion College; M.B.A., Ph.D., Michigan State University

Jackson, Marvin R. Jr. (1962). Professor Emeritus of Economics: B.S., M.A., University of Colorado; Ph.D., University of California, Berkeley

Jackson, Naomi M. (1995). Associate Professor of Dance: B.A., McGill University (Canada); M.A., University of Surrey (United Kingdom); Ph.D., New York University

Jacob, Richard J. (1963). Professor Emeritus of Physics and Astronomy: B.S., Ph.D., University of Utah

Jacobowitz, Ronald (1970). Professor Emeritus of Mathematics and Statistics: B.A., City College of New York; M.S., University of Chicago; Ph.D., Princeton University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- Jacobs, Bertram L.** (1985), Professor of Life Sciences; B.S., Rutgers, The State University of New Jersey; Ph.D., University of California, Berkeley
- Jacobs, H. Donald** (1972), Professor Emeritus of Curriculum and Instruction; Director, Reading Clinic; B.A.Ed., M.A.Ed., Central Washington State College; D.Ed., University of Oregon
- Jacobs, Mark** (2003), Professor of Life Sciences; Dean, the Barrett Honors College; B.A., Harvard University; Ph.D., Stanford University
- Jacobson, Arthur** (1956), Professor Emeritus of Art; B.S., M.S., University of Wisconsin, Madison; Ph.D., University of Minnesota, Twin Cities
- Jacobson, David** (1992), Professor of Sociology; B.A., Hebrew University of Jerusalem, (Israel); M.S., London School of Economics (United Kingdom); Ph.D., Princeton University
- Jacobson, Dean L.** (1974), Professor Emeritus of Materials Science and Engineering; B.S., M.S., University of Notre Dame; Ph.D., University of California, Los Angeles
- Jacobson, Diana L.** (1996), Associate of Nursing; B.S.N., University of Arizona; M.S., Arizona State University
- Jain, Nemi C.** (1976), Professor of Communication; B.S., M.S., Agra University (India); Ph.D., Michigan State University
- Jakob, John H.** (1960), Professor Emeritus of Architecture; B.Arch., Ohio State University; M.S.Arch., Columbia University
- Jankowski, Daniel F.** (1964), Professor Emeritus of Mechanical and Aerospace Engineering; B.S.E., M.S.E., Ph.D., University of Michigan
- Janssen, James G.** (1968), Professor Emeritus of English; B.A., M.A., Marquette University; Ph.D., University of Wisconsin, Madison
- Jarrell, Kay** (2002), Faculty Associate of Nursing; B.S.N., West Virginia University; M.S., Arizona State University
- Jarvis, Cheryl Burke** (2000), Assistant Professor of Marketing; B.S., M.S., Texas A&M University; Ph.D., Indiana University
- Jasper, Marcia A.** (1976–86; 1993), Clinical Associate Professor of Nursing; B.S.N., St. Olaf College; M.S., Arizona State University
- Jay, William (Bill)** (1974), Professor Emeritus of Art; Diploma, Institute of Incorporated Photographers, Berkshire College of Art (United Kingdom); Final Diploma, City and Guilds of The London Institute, Berkshire College of Art (United Kingdom); M.A., M.F.A., University of New Mexico
- Jeans, Franklyn** (2002), Director, Communications, College of Law; B.S., California State Polytechnical College; M.S., Columbia University; J.D., Arizona State University
- Jelinek, James** (1953), Professor Emeritus of Education; B.S., University of Illinois; M.A., Northwestern University; Ed.D., Indiana University, Bloomington
- Jenkins, William** (1979), Associate Professor of Art; B.A., Saint Lawrence University; M.F.A., State University of New York, Buffalo
- Jennings, Marianne M.** (1977), Professor of Legal and Ethical Studies; B.S., J.D., Brigham Young University
- Jiang, Danwen** (2003), Assistant Professor of Violin; B.M., St. Louis Conservatory of Music; M.M., Rutgers, The State University of New Jersey; A.D., Oberlin College
- Jiang, Nan** (2000), Associate Research Scientist of Physics and Astronomy; B.Sc., Jilin University (China); M.S., Chinese Science Academy (China); Ph.D., University of Birmingham (United Kingdom)
- Joehnk, Michael D.** (1982), Professor Emeritus of Finance; B.S., University of Arizona; M.B.A., Arizona State University; Ph.D., University of Arizona
- Joganic, Edward F.** (1996), Adjunct Professor of Speech and Hearing Science; B.S., M.S., M.D., University of Arizona
- Johannes, Tricia** (1998), Faculty Associate of Design; B.S.D., Arizona State University
- Johanson, Donald C.** (1997), Professor of Anthropology; Director, Institute of Human Origins; B.A., University of Illinois, Urbana-Champaign; M.A., Ph.D., University of Chicago
- Johnson, Alan P.** (1967), Professor Emeritus of English; B.A., Amherst College; M.A., University of Michigan; Ph.D., University of Minnesota, Twin Cities
- Johnson, Douglas A.** (1974), Professor of Accountancy; B.B.A., Ph.D., University of Texas; C.P.A., Texas
- Johnson, John M.** (1972), Professor of Justice Studies; B.A., Indiana University, Bloomington; M.A., San Diego State College; Ph.D., University of California, San Diego
- Johnson, Linda Nelson** (1985), Associate Professor of Design; B.A., M.A., Iowa State University
- Johnson, Marysia** (1997), Associate Professor of English; B.A., Saint Francis College, Brooklyn; M.A., Monterey Institute of International Studies; Ph.D., Georgetown University
- Johnson, Paul C.** (1994), Professor of Civil and Environmental Engineering; Associate Dean, Research, Ira. A. Fulton School of Engineering; B.S., University of California, Davis; M.A., Ph.D., Princeton University
- Johnson, Penelope M.** (1995), Clinical Assistant Professor of Nursing; B.S., University of Colorado; M.S., Arizona State University
- Johnson, Robert A.** (1999), Adjunct Professor of Life Sciences; B.S., M.S., University of Illinois, Urbana-Champaign; Ph.D., Arizona State University
- Johnson, Roy M.** (1952–53; 1955), Professor Emeritus of Life Sciences; A.B., M.S., University of Chicago; Ph.D., University of New Mexico
- Johnson, Sue M.** (1994), Faculty Associate of Nursing; B.S.N., M.S., Arizona State University
- Johnson, Wendee** (1990), Clinical Associate Professor of Nursing; B.S.N., Gustavus Adolphus College; M.S.N., University of Pennsylvania
- Johnson, William G.** (1990), Professor of Health Administration and Policy; B.S., University of Pennsylvania; M.A., Temple University; Ph.D., Rutgers, The State University of New Jersey
- Johnson, William S.** (1990), Executive Director Emeritus, Division of Undergraduate Academic Services; B.A., Washington State University; M.S., Iowa State University; Ph.D., University of Southern California
- Johnston, Hubert** (1986), Clinical Associate Professional of Social Work; B.S., Cheyney State College; M.A., Central Michigan University; Ph.D., Cornell University
- Jones, Austin E.** (1968), Professor Emeritus of Psychology; B.A., University of Illinois; M.S., Purdue University; Ph.D., University of Rochester
- Jones, Don** (1996), Associate Professor of Mathematics and Statistics; B.S., M.S., Georgia Institute of Technology; Ph.D., University of California, Irvine
- Jones, Elizabeth E. K.** (1996), Lecturer of Mathematics and Statistics; B.S., M.A., University of Texas; Ph.D., Arizona State University

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Jones, John (1990), Associate Professor of Mathematics and Statistics; A.B., University of California, Berkeley; Ph.D., Harvard University

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Jones, Nancy (2003), Academic Associate, Center for Environmental Studies; B.S., Old Dominion University

Jones, Owen D. (1994), Professor of Law; B.A., Amherst College; J.D., Yale University

Jones, Ruth S. (1981), Professor of Political Science; Vice Provost; B.S., Indiana State University; M.A., Ph.D., Georgetown University

Jonsson, Hjorleifur (1999), Assistant Professor of Anthropology; B.A., University of Iceland; M.A., University of Iowa; M.A., Ph.D., Cornell University

Joo, Youngjoong (2001), Assistant Professor of Electrical Engineering; B.S., M.S., Korea University (South Korea); Ph.D., Georgia Institute of Technology

Jordan, K. Forbis (1987), Professor Emeritus of Educational Administration and Supervision; A.B., M.A., Western Kentucky State College; Ed.D., Indiana University

Joshi, Lokesh (2000), Assistant Research Professor of Bioengineering; B.S., M.S., University of Rajasthan (India); Ph.D., University of Bath (United Kingdom)

Juergens, Jennifer L. (2001), Assistant Professor of Finance; B.S., Ph.D., The Pennsylvania State University

Jung, Ranu (2002), Associate Professor of Bioengineering; B.Tech., Regional Engineering College, Warangal, Andhra Pradesh (India); M.S., Ph.D., Case Western Reserve University

Jurik, Nancy (1981), Professor of Justice Studies; B.A., M.A., Southern Methodist University; Ph.D., University of California, Santa Barbara

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Kagy, Virginia L. (1947), Professor Emerita of Family and Human Development; B.A., Drake University; M.S., Iowa State University; Ph.D., Johns Hopkins University

Kahler, James M. (2002), Lecturer of Marketing; B.S., Xavier University; M.S., Ohio University

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Kajikawa, William M. (1937), Professor Emeritus of Kinesiology; B.A., M.A., Arizona State University

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Kaufman, Irving (1965), Professor Emeritus of Electrical Engineering; B.E., Vanderbilt University; M.S., Ph.D., University of Illinois

Kaufmann, William B. (1968), Professor Emeritus of Physics and Astronomy; A.B., M.A., Ph.D., University of California, Berkeley

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Kazmier, Leonard J. (1965), Professor Emeritus of Economics; B.A., M.A., Wayne State University; Ph.D., Ohio State University

Kearney, James R. III (1968), Professor Emeritus of History; B.A., Pomona College; M.A., Washington University; Ph.D., University of Wisconsin, Madison

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Keats, Barbara W. (1984), Associate Professor of Management; B.A., Louisiana Technical University; M.S., Northeast Louisiana University; Ph.D., Oklahoma State University

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Keim, Gerald (2001), Clinical Professor of Executive Education; B.S., University of Delaware; M.A., Ph.D., Virginia Polytechnic Institute and State University

Keim, Robert T. (1979), Associate Professor of Computer Information Systems; B.S., M.B.A., Ph.D., University of Pittsburgh

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Keller, Thomas (1980), Associate Professor of Management; B.Ed., M.Ed., Ed.Spec., Ed.D., University of Toledo

Kellgren, Gary (2000), Lecturer of Mathematics and Statistics; B.S., Allegheny College; M.S., Southern Illinois University

Kelly, Janice M. (1982), Academic Associate, Division of Undergraduate Academic Services; Director, Academic Community Engagement Services; B.A., M.F.A., Arizona State University

Kelly, John B. (1962), Professor Emeritus of Mathematics and Statistics; B.A., Columbia University; Ph.D., Massachusetts Institute of Technology

Kelly, Richard W. (1965), Professor Emeritus of Electrical Engineering; B.S.E., M.S.E., Ph.D., University of Iowa

Kendle, Jeri Cornoyer (2001), Adjunct Professor of Design; B.S., Northern Arizona University

Kennedy, Thomas D. (1974), Professor Emeritus of Justice Studies; B.A., Tulane University; M.A., Ph.D., Louisiana State University, Baton Rouge

Kenney, Patrick (1986), Professor of Political Science; Chair, Department of Political Science; B.A., M.A.P.A., Ph.D., University of Iowa

Kenrick, Douglas T. (1980), Professor of Psychology; B.A., Dowling College; M.A., Ph.D., Arizona State University

Kerr, Barbara A. (1990), Professor of Counselor Education and Counseling Psychology; A.B., University of Missouri; M.A., Ohio State University; Ph.D., University of Missouri

Kettner, Peter M. (1979), Professor Emeritus of Social Work; B.A., Valparaiso University; M.S.W., Washington University; D.S.W., University of Southern California

Keuter, Clifford D. (1988), Professor of Dance

Kevane, Clement J. (1956), Professor Emeritus of Physics and Astronomy; B.S., Ph.D., Iowa State University

Keys, Eric G. (2002), Assistant Professor of Geography; B.A., Macalester College; M.A., University of Texas, Austin; Ph.D., Clark University

Khairallah, Philip (2000), Research Professor of Bioengineering; B.Sc., American University of Beirut (Lebanon); M.D., Columbia University

Kho, Siek-Toon (1997), Assistant Professor of Psychology; B.Sc., University of Canterbury (New Zealand); M.Ed.St., Monash University (Australia); Ph.D., University of California, Los Angeles

Kiaei, Sayfe (2001), Professor of Electrical Engineering; Interim Director, Telecommunications Research Center; B.S.E.E., M.S., Ph.D., Washington State University

Kierstead, Henry A. (1988), Professor of Mathematics and Statistics; B.A., M.A., Ph.D., University of California, San Diego

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ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Kihl, Mary (1996). Professor of Planning and Landscape Architecture: A.B., Juniata College; M.U.R.P., University of Pittsburgh; M.A., University of Michigan; Ph.D., Pennsylvania State University

Killeen, Mary (1982–84; 1986). Associate Professor of Nursing; Associate Dean for Undergraduate Programs and Extended Education, College of Nursing; B.S.N., M.S., Arizona State University; Ph.D., University of Texas, Austin

Killeen, Peter R. (1968). Professor of Psychology; B.S., Michigan State University; Ph.D., Harvard University

Kim, Bruce (2000). Associate Professor of Electrical Engineering; B.S., University of California, Irvine; M.S., University of Arizona; Ph.D., Georgia Institute of Technology

Kim, Dongrin (2001). Lecturer of Mathematics and Statistics; B.S.E.E., University of California, San Diego; M.S.E.E., University of California, Los Angeles; M.A., California State University, Los Angeles; M.A., Ph.D., University of Southern California

Kim, Joochul (1980). Associate Professor of Planning and Landscape Architecture; B.A., University of California, Berkeley; M.U.P., Ph.D., University of Michigan

Kimball, Bruce A. (1988). Adjunct Professor of Life Sciences; B.S., University of Minnesota; M.S., Iowa State University; Ph.D., Cornell University

Kimbel, William H. (1997). Professor of Anthropology; Science Director, Institute of Human Origins; B.A., Case Western Reserve University; Ph.D., Kent State University

Kimler, Stephen J. (1967). Professor Emeritus of Education; B.Ed., Milwaukee State Teachers College; M.Ed., Marquette University; Ed.D., Arizona State University

King, Tracy (1998). Faculty Associate of Nursing; B.S.N., M.S., Arizona State University

Kingston, Jerry L. (1969). Professor of Economics; ICA Faculty Representative; B.A.E., Wayne State College; M.S., Colorado State University; Ph.D., Pennsylvania State University

Kinicki, Angelo J. (1982). Professor of Management; B.B.A., M.B.A., D.B.A., Kent State University

Kinnier, Richard T. (1982). Professor of Counseling Psychology and Counselor Education; Training Director, Counseling Psychology; B.A., Boston College; Ed.M., Columbia University; Ph.D., Stanford University

Kintigh, Keith W. (1987). Professor of Anthropology; A.B., M.S., Stanford University; Ph.D., University of Michigan

Kinzig, Ann P. (1998). Assistant Professor of Life Sciences; B.S., University of Illinois, Urbana-Champaign; M.S., Ph.D., University of California, Berkeley

Kirk, Dwayne (2000). Adjunct Professor of Life Sciences; B.S., University of Queensland (Australia)

Kirkman-Liff, Bradford L. (1981). Professor of Health Administration and Policy; B.S., M.S., Carnegie Mellon University; Dr.P.H., University of North Carolina, Chapel Hill

Kirkwood, Craig W. (1983). Professor of Supply Chain Management; S.B., S.M., E.E., Ph.D., Massachusetts Institute of Technology

Klann, Margaret L. (1945). Professor Emerita Kinesiology; B.S., University of Illinois; M.A., University of Northern Colorado

Klein, James D. (1988). Professor of Educational Technology; B.A., Florida Atlantic University; M.S., Ph.D., Florida State University

Kleinfeld, Gerald R. (1962). Professor Emeritus of History; B.A., New York University; M.A., University of Michigan; Ph.D., New York University

Kleinlein, Shirley (2002). Faculty Associate of Nursing; B.S.N., Bradley University; M.S.N., University of Phoenix



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Regents' Professor of Art; B.S., Saint Lawrence University; M.F.A., State University of New York, Buffalo

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Klock, John W. (1960). Professor Emeritus of Civil Engineering; B.E., University of Southern California; M.S., Ph.D., University of California, Berkeley

Klopatek, Jeffrey M. (1981). Professor of Life Sciences; B.S., M.S., University of Wisconsin, Milwaukee; Ph.D., Oklahoma University

Knapp, Margaret M. (1990). Professor of Theatre; Associate Dean, Research and Administration, Herberger College of Fine Arts; B.A., LeMoyné College; M.A., Ph.D., City University of New York

Knaupp, Jonathan E. (1970). Professor Emeritus of Elementary Education; B.S., Oregon State University; M.A., Ph.D., University of Illinois

Knauth, L. Paul (1979). Professor of Geological Sciences; B.A., University of Chicago; Ph.D., California Institute of Technology

Knight, Donald O. (1981). Professor Emeritus of Industrial Engineering; B.E.E., Marquette University; M.S.E., Ph.D., Arizona State University

Knight, George P. (1986). Professor of Psychology; B.A., Macalester College; M.A., Ph.D., University of California, Riverside

Knight, John Costain (1965–68; 1997). Associate Research Professor, Cancer Research Institute; B.Sc., Ph.D., University of Liverpool (United Kingdom)

Knowlton, John F. (1964). Professor Emeritus of Spanish; B.A., Lewis and Clark College; M.A., Ph.D., University of Oregon

Knox, Robert L. (1963). Professor Emeritus of Economics; B.S., M.S., Oklahoma State University; Ph.D., University of North Carolina

Knudsen, Frances S. (1964). Professor Emerita of Nursing; B.S., University of Arizona; M.S., University of Colorado; Ph.D., Arizona State University

Knutson, Kraig (1997). Assistant Professor of Construction; B.S., M.S., Ph.D., Arizona State University

Knutson-Woods, Teri (1997). Academic Professional of Social Work; B.A., Grand Canyon University; M.S.W., Arizona State University

Kobayashi, Yoshihiro (2001). Assistant Professor of Architecture; B.Arch., M.Arch., Waseda University (Japan); Ph.D., University of California, Los Angeles

Kobes, Bernard W. (1986). Associate Professor of Philosophy; B.A., Calvin College; M.A., Ph.D., University of California, Los Angeles

Koblitz, Ann Hibner (1998). Professor of Women's Studies; A.B., Princeton University; Ph.D., Boston University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Koeneman, James B. (1984). Adjunct Professor of Bioengineering; B.S., University of Minnesota; M.S., Ph.D., Case Western Reserve University

Koerner, Kurt J. (1993). Faculty Associate of Construction; B.S., U.S. Air Force Academy; M.S., Golden Gate University

Koka, Balaji (1999). Assistant Professor of Management; B.E., Madurai Kamaraj University (India); M.B.A., Indian Institute of Management, Calcutta (India); Ph.D., University of Pittsburgh

Kolossa, Katalin (1994). Senior Lecturer of Mathematics and Statistics; B.A., Eötvös University (Hungary); M.A., Ph.D., Arizona State University

Kommenich, Pauline (1984). Professor of Nursing; B.S., Stanford University; M.N., University of Washington; M.A., Ph.D., University of Arizona

Konjevod, Goran (2000). Assistant Professor of Computer Science and Engineering; B.Sc., University of Zagreb (Croatia); M.Sc., Ph.D., Carnegie Mellon University

Konomos, Phillip J. (1991). Learning Resource Specialist. Library Instruction, Systems, and Technology; B.S., M.Ed., Arizona State University

Koonce, Frank W. (1978). Professor of Music; B.M., North Carolina School of the Arts; M.M., Southern Methodist University

Koopmans, Rachel (2001). Assistant Professor of History; B.A., Calvin College; M.A., Northwestern University; M.A., Ph.D., University of Notre Dame

Kopta, Anne Elgar (1999). Associate Professor of Music

Kortman, Sharon A. (1998). Lecturer of Curriculum and Instruction; B.A., M.Ed., Ed.D., Arizona State University

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Koss-Chioino, Joan D. (1992). Professor Emerita of Anthropology; B.F.A., Temple University; M.A., Ph.D., University of Pennsylvania

Kostelich, Eric (1989). Professor of Mathematics and Statistics; B.S., University of North Carolina; M.S., Ph.D., University of Maryland, College Park

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Krahenbuhl, Gary S. (1973). Professor Emeritus of Kinesiology; B.S., M.S., Northern Illinois University; Ed.D., University of Northern Colorado

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Krause, Stephen (1981). Professor of Materials Science and Engineering; Associate Chair, Department of Chemical and Materials Engineering; B.S., Northwestern University; M.S., Illinois Institute of Technology; Ph.D., University of Michigan

Kreitner, Robert J. III (1975). Professor Emeritus of Management; B.S., M.B.A., University of Nebraska, Omaha; Ph.D., University of Nebraska, Lincoln

Krinsley, David (1976). Professor Emeritus of Geological Sciences; Ph.B., S.B., S.M., Ph.D., University of Chicago

Kroelinger, Michael D. (1980). Professor Emeritus of Design; B.S., University of Alabama; M.S., Ph.D., University of Tennessee, Knoxville

Kroloff, Reed A. (1987). Associate Professor of Architecture; B.A., Yale University; M.Arch., University of Texas, Austin

Kronenfeld, Jennie J. (1990). Professor of Sociology; B.A., University of North Carolina, Chapel Hill; M.A., Ph.D., Brown University

Kronengold, Eric A. (1970). Professor Emeritus of Art; B.A., M.A., San Francisco State University

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Krus, David J. (1975). Professor of Psychology in Education; B.A., M.A., Charles University; Ph.D., University of Minnesota, Twin Cities

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- Leathers, Chester R.** (1957), Professor Emeritus of Life Sciences; B.S., Eastern Illinois University; M.S., Ph.D., University of Michigan
- Lebed, Richard F.** (2000), Assistant Professor of Physics and Astronomy; B.S., Michigan State University; M.A., Ph.D., University of California, Berkeley
- Leclerc, Denis** (1994), Assistant Professor of Recreation Management and Tourism; B.S., M.A., University of Upper Normandy (France); M.S., Ph.D., Arizona State University
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- Lee, Deanna** (2001), Assistant Professor of Accountancy; B.S., University of Pennsylvania; Ph.D., University of Illinois
- Lee, James J.** (1995), Adjunct Professor of Life Sciences; B.S., State University of New York, Stony Brook; Ph.D., California Institute of Technology
- Lee, Nancy A.** (1995), Adjunct Professor of Life Sciences; B.S., Memphis State University; Ph.D., Cornell University
- Lee, Tae-woo** (1993), Associate Professor of Mechanical and Aerospace Engineering; B.S., Ohio State University; M.S.E., Ph.D., University of Michigan
- Lee, Yann-Hang** (2000), Professor of Computer Science and Engineering; B.S., National Cheng Kung University (Taiwan); M.S., Rensselaer Polytechnic Institute; Ph.D., University of Michigan
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- Lemery, Kathryn** (2001), Assistant Professor of Psychology; B.A., University of Oregon; M.S., Ph.D., University of Wisconsin, Madison
- Leon, Luis Daniel** (1999), Assistant Professor of Religious Studies; A.B., University of California, Berkeley; M.T.S., Harvard University; Ph.D., University of California, Santa Barbara
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- Leshowitz, Barry H.** (1970), Associate Professor of Psychology; B.S., M.A., Brooklyn College; Ph.D., City University of New York
- Lessard, Elizabeth C.** (1969), Professor Emerita of Dance; B.S., Georgia College; M.A., Ph.D., Texas Woman's University
- Lester, Neal** (1997), Professor of English; Chair, Department of English; B.A., West Georgia College; M.A., Ph.D., Vanderbilt University
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- Levine, Gustav** (1967), Professor Emeritus of Psychology; B.A., M.A., College of the City of New York; Ph.D., Columbia University
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- Maltz, Arnold B.** (1997), Associate Professor of Supply Chain Management; B.S., Trinity College, Hartford; M.A., University of California, Santa Barbara; M.S., Northwestern University; Ph.D., Ohio State University
- Mamlouk, Michael S.** (1984), Professor of Civil and Environmental Engineering; B.S.C.E., Cairo University (Egypt); M.S.C.E., Ph.D., Purdue University
- Manchester, Laurie** (2000), Assistant Professor of History; B.A., Wellesley College; M.A., M.Phil., Ph.D., Columbia University
- Mandel, Naomi** (2000), Assistant Professor of Marketing; A.B., Dartmouth College; M.B.A., Arizona State University; M.I.M., American Graduate School of International Management; Ph.D., University of Pennsylvania
- Manelli, Alejandro** (1997), Professor of Economics; Licenciatura, National University of Buenos Aires (Argentina); M.A., Ph.D., University of California, Berkeley
- Manera, Elizabeth S.** (1967), Professor Emerita of Curriculum and Instruction; B.S., M.A., Towson State College; Ed.D., Arizona State University
- Mangini, Margaret A.** (1990), Director, Bureau of Educational Research and Services; B.S., M.Ed., Edinboro State College; Ed.D., Arizona State University
- Mankin, Lawrence D.** (1973), Professor Emeritus of Public Affairs; B.B.A., City College; M.A., Ph.D., University of Illinois
- Mann, Martha F.** (2001), Assistant Professor of Educational Technology; B.S., Northern Arizona University; M.Ed., Ph.D., University of Virginia
- Manuelito, Kathryn** (2001), Assistant Professor of Curriculum and Instruction; B.A., M.A., University of New Mexico, Albuquerque; Ph.D., Arizona State University
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- Marchant, Gary E.** (1999), Associate Professor of Law; Executive Director, Center for the Study of Law, Science, and Technology; B.Sc., University of British Columbia (Canada); M.P.P., J.D., Harvard University; Ph.D., University of British Columbia (Canada)
- Marean, Curtis W.** (2001), Professor of Anthropology; Research Associate, Institute of Human Origins; B.A., Pennsylvania State University; M.A., Ph.D., University of California, Berkeley
- Margolis, Eric** (1995), Associate Professor of Educational Leadership and Policy Studies; B.A., State University of New York, New Paltz; Ph.D., University of Colorado, Boulder
- Marin, Christine N.** (1985), Associate Archivist, Archives and Manuscripts; B.A., M.A., Arizona State University
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- Martin, Carlos E.** (2003), Assistant Professor of Architecture and Construction; B.S.A.D., Massachusetts Institute of Technology; M.Arch., M.S.C.E., University of Michigan; M.S., Ph.D., Stanford University
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- Martin, J. Spencer** (2000), Assistant Professor of Finance; B.S., M.B.A., University of Texas, Austin; A.M., Ph.D., University of Pennsylvania
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- Mason, Hugh S.** (2002), Associate Professor of Life Sciences; B.S., University of Texas, Austin; Ph.D., University of Arizona
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Matera, Frances R. (1989), Associate Professor of Journalism and Mass Communication; B.S., Florida International University; M.A., Goddard College; Ph.D., University of Miami

Matheson, Alan A. (1967), Professor of Law; B.A., M.S., J.D., University of Utah

Mathur, Sarup (2002), Clinical Associate Professor of Curriculum and Instruction; B.A., B.Ed., M.A., M.Ed., Agra University (India); M.Ed., Ph.D., Arizona State University

Mathy, Pamela A. (1998), Clinical Professor of Speech and Hearing Science; Director, Clinical Services; B.A., University of Massachusetts; M.A., Washington State University; Ph.D., University of Wisconsin, Madison

Matt, Kathleen S. (1987), Professor of Kinesiology; B.A., M.S., University of Delaware; Ph.D., University of Washington

Matt, Pamela (1980), Professor Emerita of Dance; B.A., University of Washington; M.A., University of Illinois

Matthias, Judson S. (1967), Professor Emeritus of Civil and Environmental Engineering; B.S., United States Military Academy; M.S., Oregon State University; Ph.D., Purdue University

Mattox, John H. (1995), Adjunct Professor of Life Sciences; B.A., M.D., University of Colorado

Mattson, Susan (1993), Professor of Nursing; Chair, Division of Adult Health/Parent-Child Nursing; B.S., M.A., M.S., California State University, Los Angeles; Ph.D., Claremont Graduate University

Matyushov, Dimitry (2000), Assistant Professor of Chemistry and Biochemistry; B.S., Moscow Institute of Physics and Technology (Russia); Ph.D., Vienna University of Technology (Austria)

Maxwell, Katherine Davis (1996), Clinical Assistant Professor of Nursing; B.S., University of Utah; M.S., Arizona State University

Maxwell, Kathryn (1988), Professor of Art; B.A., Northwestern University; M.F.A., University of Wisconsin, Madison

May, Judy (1986), Associate Professor of Music; M.M., The Juilliard School



Mayer, James W.
(1992)

Regents' Professor of Chemical and Materials Engineering and Solid State Science; B.S., Ph.D., Purdue University

Mayer, Lawrence S. (1983), Professor of Economics; B.S., M.S., Ohio State University; M.D., Associated Medical Schools of the Caribbean; Ph.D., Ohio State University

Mayer, Michael (1978), Associate Professor of Communication; B.A., M.A., University of Wyoming; Ph.D., University of Kansas

Mays, Larry W. (1989), Professor of Civil and Environmental Engineering; B.S., M.S., University of Missouri, Rolla; Ph.D., University of Illinois

McBeath, Michael K. (1998), Associate Professor of Psychology; B.A., Brown University; M.S., University of California, Santa Barbara; Ph.D., Stanford University

McBride, Ingrid (2001), Clinical Assistant Professor of Communication Disorders; B.S., M.S., Arizona State University

McCabe, Barbara (1997), Assistant Professor of Public Affairs; B.A., M.P.A., Florida Atlantic University; Ph.D., Florida State University

McCarter, Joan H. (1961), Associate Professor of Mathematics and Statistics; B.S., M.A., University of Arizona

McCarthy, Marianne (1994), Associate Professor of Nursing; B.S.N., Mount Saint Mary College; M.S.N., Seton Hall University; Ph.D., University of California, San Francisco

McCarthy, Matthew J. (2003), Lecturer of Computer Information Systems; B.S., Arizona State University; M.S., Northern Arizona University

McCartney, Martha R. (1989), Senior Research Scientist, Center for Solid State Science; B.S., The Evergreen State College; Ph.D., Arizona State University

McCartney, Peter (2000), Assistant Research Scientist, Data Manager, Center for Environmental Studies; B.A., M.A., University of Arizona; Ph.D., University of Calgary (Canada)

McCormack, Brian (2000), Lecturer of Interdisciplinary Studies; B.A., B.S., University of Nebraska, Omaha; B.A., Australian National University (Australia); M.A., Ph.D., Arizona State University

McCoy, Janetta Mitchell (1999), Assistant Professor of Design; B.L.S., St. Edwards University; M.S., Cornell University; Ph.D., University of Wisconsin, Milwaukee

McCoy, Kathleen M. (1976), Associate Professor of Curriculum and Instruction; B.S., University of Portland; M.S., Portland State University; Ph.D., University of Oregon

McCoy, Ronald (1995), Professor of Architecture; Director, School of Architecture; B.S., University of Southern California; M.Arch., Princeton University

McCready, Richard R. (1960), Professor Emeritus of Computer Information Systems; B.S., Valley City State Teachers College; M.A., Ed.D., University of Northern Colorado

McDermott, Lauren (1990), Associate Professor of Design; B.F.A., M.F.A., Rochester Institute of Technology

McDonald, Arlys (1970), Librarian Emeritus; B.Mus., St. Mary of the Plains College; M.Mus., University of Illinois

McDonald, John N. (1969), Professor Emeritus of Mathematics and Statistics; A.B., King's College; M.S., Ph.D., Rutgers, The State University of New Jersey

McDonald, Kelly M. (2000), Assistant Instructional Professional of Communication; Director of Forensics; B.A., Pacific Lutheran University; M.A., Ph.D., University of Kansas

McDonough, Peter (1990), Professor Emeritus of Political Science; B.S., Saint Louis University; Ph.D., University of Michigan

McDowell, John M. (1978), Professor of Economics; B.S., M.S., Ph.D., University of California, Los Angeles

McFarland, Elaine H. (1973), Professor Emerita of Health Science; B.A., Marietta College; M.N., Case Western Reserve University

McGaughey, Robert W. (1971), Professor Emeritus of Life Sciences; Director, Interdisciplinary Committee for Molecular and Cellular Biology; B.A., Augustana College; M.A., University of Colorado; Ph.D., Boston University

McGaw, Dickinson L. (1968), Professor Emeritus of Public Affairs; B.A., M.A., Ph.D., Indiana University, Bloomington

McGehee, Shelley (1985), Librarian Emerita; B.Mus., Converse College; M.Mus., M.L.S., University of Alabama

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- McGowan, Patrick J.** (1979), Professor Emeritus of Political Science; B.A., University of the South; M.A., Johns Hopkins University; Ph.D., Northwestern University
- McGrath, Jacqueline** (1999), Assistant Professor of Nursing; B.S.N., University of Akron; M.S.N., Kent State University; Ph.D., University of Pennsylvania
- McGregor, Joan L.** (1989), Associate Professor of Life Sciences and Philosophy; Lincoln Associate Professor of Bioethics; B.A., University of California, Davis; M.A., Ph.D., University of Arizona
- McHugh, Kevin E.** (1985), Associate Professor of Geography; B.S., Pennsylvania State University; M.A., Arizona State University; Ph.D., University of Illinois, Urbana-Champaign
- McIsaac, Marina Stock** (1980), Professor Emerita of Educational Technology; B.A., Pomona College; M.A., Ph.D., University of Wisconsin, Madison
- McIver, Beverly** (1996), Associate Professor of Art; B.A., North Carolina Central University; M.F.A., University of Pennsylvania
- McKelvy, Michael J.** (1976), Senior Research Scientist, Center for Solid State Science; B.S., University of California, Berkeley; M.S., Ph.D., Arizona State University
- McKenzie, Patrick Bruce** (1970), Professor Emeritus of Accountancy; B.S., M.S., Kansas State University; Ph.D., Michigan State University
- McLaughlin, Ilene** (1995), Assistant Librarian, Hayden Reference Services; B.A., Lake Forest College; M.L.S., Simmons College
- McLin, Katherine** (1997), Associate Professor of Music; B.M., Oberlin College Conservatory, Ohio; M.M., Indiana University, Bloomington; D.M.A., University of Michigan, Ann Arbor
- McMahon, Jeff** (2001), Senior Lecturer of Theatre; Director, M.F.A. Performance Program; B.A., State University of New York; M.F.A., Columbia University
- McManus, Elizabeth B.** (2000), Lecturer of the Barrett Honors College; B.A., M.A., Ph.D., University of Virginia
- McMillan, Paul F.** (1983), Professor Emeritus of Chemistry and Biochemistry; B.Sc., University of Edinburgh (United Kingdom); Ph.D., Arizona State University
- McMillen, Phyllis** (2000), Faculty Associate of Nursing; B.S.N., Union College, Lincoln; M.S.N., University of Nebraska Medical Center
- McNally, T.M.** (1999), Associate Professor of English; B.A., Rockford College; M.F.A., Arizona State University
- McNeil, Elizabeth A.** (1998), Academic Associate of English; Academic Advisor; B.A., California State University, Chico; M.F.A., Ph.D., Arizona State University
- McNeill, Barry W.** (1976), Associate Professor of Mechanical Engineering; B.S., M.S., Ph.D., Stanford University
- McPhee, Robert D.** (1998), Professor of Communication; B.A., M.A., Ph.D., Michigan State University
- McPheters, Lee R.** (1976), Professor of Economics; Director, Bank One Economic Outlook Center; Associate Dean, Executive and Professional Programs, W. P. Carey School of Business; A.B., San Francisco State University; Ph.D., Virginia Polytechnic Institute and State University
- McSheffrey, Gerald R.** (1982), Professor Emeritus of Architecture; Dipl. Arch., University College, London (United Kingdom); Dipl. C.D., Edinburgh University (United Kingdom)
- McTaggart, W. Donald** (1971), Professor Emeritus of Geography; M.A., University of St. Andrews (United Kingdom); Ph.D., Australian National University (Australia)
- McWhirter, J. Jeffries** (1970), Professor Emeritus of Counseling Psychology and Counselor Education; B.A., Saint Martin's College; M.Ed., Oregon State University; M.Ed., Ph.D., University of Oregon
- Mehall, Gregory Lawrence** (1992), Associate Research Professional of Geological Sciences; M.S., Stanford University
- Meir, Baruch I.** (2000), Assistant Professor of Music; B.Mus., M.Mus., Tel Aviv University (Israel); D.M.A., Arizona State University
- Meissinger, Ellen Murray** (1986), Professor of Art; B.F.A., M.F.A., University of North Carolina, Greensboro
- Melichar, Dudley W.** (1974), Professor Emeritus of Justice Studies; B.S., M.S., South Dakota State University; Ed.D., Arizona State University
- Melnick, Robert** (1987), Senior Research Scientist for Public Affairs; Director, Morrison Institute for Public Policy; B.A., Dartmouth College; M.A., Ph.D., Arizona State University
- Melody, Noeleen** (1991), Assistant Research Professor, Cancer Research Institute; B.S., Ph.D., University College, Galway (Ireland)
- Melvin, Michael** (1980), Professor of Economics; B.B.A., University of Houston; M.A., San Diego State University; Ph.D., University of California, Los Angeles
- Méndez, José A.** (1980), Professor of Economics; B.A., M.A., University of Texas, Austin; M.A., Ph.D., Southern Methodist University
- Menéndez, José** (1987), Professor of Physics and Astronomy; Licenciado en Física, Balseiro Institute (Argentina); Dr. rer. nat., Stuttgart University (Germany)
- Mengeling, Kristina** (1999), Assistant Law Librarian, Ross-Blakley Law Library; B.A., Northern Illinois University; M.L.S., Rosary College
- Menjivar, Cecilia** (1995), Associate Professor of Justice Studies; B.A., M.S., University of Southern California; Ph.D., University of California, Davis
- Menke, Robert F.** (1947), Professor Emeritus of Education; B.S., Oshkosh State College; M.A., Ph.D., Northwestern University
- Merbs, Charles F.** (1973), Professor Emeritus of Anthropology; B.S., M.S., Ph.D., University of Wisconsin, Madison
- Merrill, Bruce D.** (1971), Professor of Journalism and Mass Communication; Director, Media Research Program; M.A., Brigham Young University; Ph.D., University of Michigan
- Mesch, Claudia** (2001), Assistant Professor of Art; B.A., Yale University; M.A., University of California, Los Angeles; Ph.D., University of Chicago
- Messman, Susan J.** (2000), Assistant Professor of Communication; B.A., University of Missouri, Columbia; M.S., Illinois State University; Ph.D., Ohio University
- Metcalf, V. Alonzo** (1971), Professor Emeritus of International Studies; B.S., M.S., University of Arkansas; Ph.D., University of Missouri, Columbia
- Metha, Arlene** (1971), Professor Emerita of Counseling Psychology; B.A., Arizona State University; M.A., Ohio State University; Ph.D., University of Southern California
- Metos, Thomas H.** (1965), Professor Emeritus of Educational Administration and Supervision; B.S., M.S., Ph.D., University of Utah
- Metz, John** (1980), Professor Emeritus of Music; B.A., M.M., Syracuse University; D.M.A., The Juilliard School

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Meunier, John (1987). Professor of Architecture; B.Arch., University of Liverpool (United Kingdom); M.Arch., Harvard University; M.A., University of Cambridge (United Kingdom)

Middleton, James Arthur (1998). Associate Professor of Curriculum and Instruction; Associate Dean for Research, College of Education; B.A., California State University, Chico; M.S., Ph.D., University of Wisconsin, Madison

Mignolet, Marc P. (1987). Professor of Mechanical and Aerospace Engineering; B.S., University of Liege (Belgium); Ph.D., Rice University

Mikellides, Pavlos G. (2002). Assistant Professor of Mechanical and Aerospace Engineering; B.S., M.S., Ph.D., Ohio State University

Miller, Barbara K. (1976). Professor Emerita of Nursing; B.S.N., M.S.Ed., University of Akron; Ph.D., University of Texas, Austin

Miller, Donald S. (1981). Associate Professor of Computer Science and Engineering; B.S., Syracuse University; M.S., Ph.D., University of Southern California

Miller, Keith D. (1987). Professor of English; B.A., Texas Christian University; M.A., State University of New York, Albany; Ph.D., Texas Christian University

Miller, Rosanna (1974). Librarian Emerita; B.A., M.A., Arizona State University; M.L.S., University of Arizona

Miller, Susan A. (2001). Assistant Professor of American Indian Studies; B.A., M.A., University of Oklahoma; Ph.D., University of Nebraska, Lincoln

Miller, Terri (1997). Senior Lecturer of Mathematics and Statistics; B.S., M.A., Arizona State University

Miller-Loessi, Karen A. (1984). Associate Professor of Sociology; B.A., University of California, Berkeley; M.A., Ph.D., Stanford University

Millsap, Roger E. (1997). Professor of Psychology; B.S., University of Washington; M.A., Ph.D., University of California, Berkeley

Milner, Joe W. (1967). Professor Emeritus of Journalism and Mass Communication; B.A., East Texas State University; M.A., University of Oklahoma; Ed.D., University of Wyoming

Milun, Kathryn (2000). Assistant Professor of English and Justice Studies; B.A., M.A., Ph.D., University of Minnesota

Mings, Robert C. (1971). Professor Emeritus of Geography; B.S., M.A.T., Indiana University, Bloomington; Ph.D., Ohio State University

Minteer, Ben (2003). Assistant Research Professor of Life Sciences; B.A., University of Albany; M.S., Ph.D., University of Vermont

Mintz, Sandra L. (1986). Clinical Associate Professor of Speech and Hearing Science; B.A., Indiana University; M.S., University of Arizona

Misra, Rajeev (1991). Professor of Life Sciences; B.S., Kanpur University (India); M.S., G.B. Pant University (India); Ph.D., Adelaide University (Australia)

Mitchell, Frederic F. (1961). Professor Emeritus of Education; B.A., M.A., University of Arizona; Ph.D., Columbia University

Mitchell, John (1990). Associate Research Professional of Dance; Director, Dance Multimedia Learning Center; B.M., Webster University, St. Louis; M.M., University of South Florida

Mitchell, Michael J. (1990). Associate Professor of Political Science; B.A., Fordham University; M.A., Ph.D., Indiana University, Bloomington

Mittelmann, Hans Detlef (1982). Professor of Mathematics and Statistics; M.A., University of Mainz (Germany); Ph.D., Habilitation, University of Darmstadt (Germany)

Mobasher, Barzin (1991). Associate Professor of Civil and Environmental Engineering; B.S., University of Wisconsin, Platteville; M.S., Northeastern University; Ph.D., Northwestern University

Mogey, John M. (1987). Adjunct Professor of Sociology; B.A., M.A., D.Sc., Queen's University (United Kingdom)

Mokwa, Michael P. (1979). Professor of Marketing; Chair, Department of Marketing; B.B.A., M.B.A., Ph.D., University of Houston

Molnar, Alex (2001). Professor of Educational Leadership and Policy Studies; Director, Education Policy Studies Laboratory; B.A., North Park College; M.A., Northwestern University; Ph.D., University of Wisconsin, Milwaukee

Monahan, Torin (2003). Assistant Professor of Justice Studies; B.A., M.A., California State University, Northridge; M.S., Ph.D., Rensselaer Polytechnic Institute

Monczka, Robert M. (1999). Research Professor of Supply Chain Management; B.A., M.B.A., Ph.D., Michigan State University

Mongeau, Paul A. (2002). Professor of Communication; B.S., M.A., Arizona State University; Ph.D., Michigan State University

Montenegro, Leonard Jose (1986). Senior Research Professional of Mechanical and Aerospace Engineering; B.S., State University of New York, Albany

Montero, Darrel (1979). Associate Professor of Social Work; B.A., California State University, Sacramento; M.A., Ph.D., University of California, Los Angeles

Montgomery, Douglas C. (1988). Professor of Industrial Engineering; B.S.I.E., M.S., Ph.D., Virginia Polytechnic Institute and State University

Montgomery, Eric (1997). Faculty Associate of Design; B.F.A., Arizona State University

Montiel, Miguel (1974). Professor Emeritus of Chicana and Chicano Studies; Motorola Presidential Professor in Community Revitalization; B.S., University of Arizona; M.S.W., Arizona State University; D.S.W., University of California, Berkeley

Montoya, Janet (1999). Adjunct Professor of Anthropology; B.A., M.A., University of Houston, Clear Lake

Mooney, Elina (1988). Professor Emerita of Dance

Moor, William C. (1968). Associate Professor of Industrial Engineering; Associate Chair, Department of Industrial Engineering; B.S., M.S., Washington University; Ph.D., Northwestern University

Moore, Ana L. (1989). Professor of Chemistry and Biochemistry; B. of Pharmacy, National University of La Plata (Argentina); M.Sc., Federal University of Rio de Janeiro (Brazil); Ph.D., Texas Tech University

Moore, Carleton B. (1961)
Regents' Professor Emeritus of Chemistry and Biochemistry and Geological Sciences; B.S., Alfred University; Ph.D., California Institute of Technology



Moore, Diane B. (1980). Librarian Emerita, Noble Science Reference Services; B.S., College of William and Mary; M.L.S., University of Wisconsin, Madison

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Moore, Elsie G.J. (1981), Professor of Psychology in Education; Director, Division of Psychology in Education; B.A., Elmhurst College; M.A., Ph.D., University of Chicago

Moore, J. Douglas (1969), Associate Professor of Mathematics and Statistics; B.S., M.S., Idaho State University; Ph.D., Syracuse University

Moore, Michael (1982), Professor of Life Sciences; B.A., Indiana University; M.S., Ph.D., University of Washington

Moore, Moses N. (1989), Associate Professor of Religious Studies; B.A., Eckerd College; M.Div., Yale University; M.Phil., Ph.D., Union Theological Seminary

Moore, Patricia (1984), Professor Emerita of Nursing; B.S.N., Loyola University, Chicago; M.S., Catholic University of America; M.P.H., Dr.P.H., Johns Hopkins University

Moore, Patricia A. (2000), Adjunct Professor of Design; B.F.A., Rochester Institute of Technology; M.A., Columbia University

Moore, Thomas A. (1976), Professor of Chemistry and Biochemistry; B.A., Ph.D., Texas Tech University

Moorhead, Gregory (1978), Associate Professor of Management; B.S.I.E., M.B.A., Ph.D., University of Houston

Mor, Tsafir (2000), Assistant Professor of Life Sciences; B.Sc., M.Sc., Ph.D., Hebrew University of Jerusalem (Israel)

Morgan, Don (2000), Associate Professor of Kinesiology; B.M.E., Northwestern University; M.S., University of Tennessee, Knoxville; Ph.D., Arizona State University

Morgan, Miriam J. (1965), Instructor Emerita of French; Licence-ès-Lettres, University of Paris (France); M.A., Arizona State University

Morgan, Owen W. (1968), Professor Emeritus of Family and Human Development; B.A., Grinnell College; M.A., University of Nebraska, Omaha; Ph.D., University of Nebraska, Lincoln

Morgan, Thais E. (1985), Associate Professor of English; B.A., Smith College; M.A., Ph.D., Brown University

Moroney, Robert M. (1981), Professor of Social Work; A.B., M.S.W., Boston College; M.P.H., Harvard University; Ph.D., Brandeis University

Morrell, Darryl (1988), Associate Professor of Electrical Engineering; B.S., M.S., Ph.D., Brigham Young University

Morris, Brenda C. (1994), Clinical Associate Professor of Nursing; B.S.N., M.S., University of Arizona; Ed.D., Arizona State University

Morris, Donald H. (1962), Professor Emeritus of Anthropology; B.A., Arizona State University; M.A., Ph.D., University of Arizona

Morrison, Kenneth M. (1983), Professor of Religious Studies; B.A., Saint Dunstan's University; M.A., Ph.D., University of Maine

Morse, Jon (2003), Associate Professor of Physics and Astronomy; B.A., Harvard University; M.S., Ph.D., University of North Carolina

Moses, Michele (2000), Assistant Professor of Educational Leadership and Policy Studies; B.A., University of Virginia; M.Ed., University of Vermont; M.A., Ph.D., University of Colorado

Mossman, Kenneth L. (1990), Professor of Life Sciences; Director, Radiation Safety Office; B.S., Wayne State University; M.Ed., University of Maryland, College Park; M.S., Ph.D., University of Tennessee, Knoxville

Moulton, Gerald L. (1967), Professor Emeritus of Counselor Education; B.A., Hamline University; M.Ed., Ed.D., University of Oregon

Mowrer, Donald E. (1965), Professor Emeritus of Speech and Hearing Science; B.A., M.A., Florida State University; Ph.D., Arizona State University

Moyer, Joan E. (1971), Professor Emerita of Curriculum and Instruction; B.S., Kutztown State University; M.Ed., Pennsylvania State University; Ph.D., University of Maryland, College Park

Muccino, Julia Catherine (1997), Associate Professor of Civil and Environmental Engineering; B.C.E., Villanova University; M.S., Ph.D., University of Notre Dame

Mueller-Alexander, Jeanette M. (1989), Librarian, Hayden Reference Services; B.A., Moorhead State University; M.L.S., Indiana University, Bloomington

Mulligan, Donald E. (1985), Professor Emeritus of Construction; B.S.E., M.S.M.E., Arizona State University

Mulvihill, Josepha Anne (1983), Associate Librarian, Hayden Reference Services; B.S., University of Kansas; M.L.S., Emporia State University

Munk, Morton E. (1961), Professor of Life Sciences; Interim Director, School of Life Sciences; B.S., Northwestern University; M.S., University of Miami; Ph.D., Wayne State University

Munshi, Perseus B. (2001), Lecturer of Accountancy; B.Com., Bangalore University; M.B.A., Ohio State University; C.P.A., Arizona

Murdough, John M. (1993), Faculty Associate of Construction; B.S., M.B.A., Arizona State University

Murff, Scott (1998), Assistant Professor of Architecture; B.S.D., Clemson University; B.Arch., The Cooper Union

Murphey, Claudia (1996), Professor of Dance; B.A., Western College; M.A., George Washington University

Murphy, Jeffrie G. (1981)
Regents' Professor of Law and Philosophy; B.A., Johns Hopkins University; Ph.D., University of Rochester



Murphy, Juanita F. (1971), Professor Emerita of Nursing; Dean Emerita, College of Nursing; B.A., Oklahoma Baptist University; M.S., Ph.D., Case Western Reserve University

Murphy, Kurt R. (1986), Librarian; Assistant Dean, Personnel, University Libraries; B.S., M.L.S., University of Illinois; M.B.A., Arizona State University

Murranka, Patricia A. (1977), Professor Emerita of Supply Chain Management; B.A., Trenton State College; M.A., Rider College; Ed.D., Utah State University

Murray, Roger N. (1968), Professor Emeritus of English; B.A., B.S., Moorhead State Teachers College; M.A., Stanford University; Ph.D., University of Iowa

Musheno, Michael C. (1977), Professor Emeritus of Justice Studies and Public Affairs; B.A., Lycoming College; M.A., Ph.D., American University

Muthuswamy, Jitendran (2000), Assistant Professor of Bioengineering; B.Tech., Indian Institute of Technology (India); M.S., Ph.D., Rensselaer Polytechnic Institute

Myhajlenko, Stefan (1986), Associate Research Scientist and Associate Director, Center for Solid State Electronics Research; Ph.D., University of Manchester, Victoria (United Kingdom)

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Myler, Charles E. Jr. (1968), Professor Emeritus of Real Estate; B.B.A., Loyola University; M.B.A., Harvard University; Ph.D., University of Florida

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- Nagasawa, Richard H.** (1969), Professor Emeritus of Sociology; B.A., University of Hawaii, Manoa; M.A., Ph.D., University of Washington
- Nagoshi, Craig** (1989), Associate Professor of Psychology; B.A., M.A., Ph.D., University of Hawaii, Manoa
- Nagrin, Daniel** (1982), Professor Emeritus of Dance; B.S., College of the City of New York
- Nagy, Bethel** (2000), Adjunct Professor of Anthropology; B.A., Arizona State University; M.A., University of Toronto (Canada); Ph.D., Arizona State University
- Nagy, John D.** (1999), Adjunct Professor of Life Sciences; B.S., Eastern Michigan University; B.S., University of Michigan, Ann Arbor; Ph.D., Arizona State University
- Nagy, Sandra Griffiths** (1984), Academic Associate, Division of Undergraduate Academic Services; Assistant Director, Academic Success Programs; B.Ed., M.A., Ph.D., Arizona State University
- Nakagawa, Kathryn** (1996), Associate Professor of Psychology in Education; B.A., M.A., University of Notre Dame; Ph.D., Northwestern University
- Nakamura, Mutsumi** (2002), Lecturer of Computer Science and Engineering; B.S., M.S., University of Texas, El Paso; Ph.D., University of Texas, Arlington
- Nakayama, Thomas K.** (1991), Professor of Communications and Asian Pacific American Studies; Director, Asian Pacific American Studies Program; A.B., Georgia State University; M.A., Ph.D., University of Iowa
- Napoli, Maria** (1996), Associate Professor of Social Work; B.A., H.H. Lehman College; M.S.W., Ph.D., New York University
- Nardari, Federico** (1999), Assistant Professor of Finance; B.S., University of Bergamo (Italy); M.S.B.A., Ph.D., Washington University, St. Louis
- Nardella, Francis A.** (1992), Adjunct Professor of Bioengineering; A.B., West Virginia University; M.D., West Virginia University, School of Medicine
- Nash, Leanne T.** (1971), Professor of Anthropology; B.A., University of California, Davis; M.A., Ph.D., University of California, Berkeley
- Nash, Thomas H. III** (1971), Professor of Life Sciences; B.S., Duke University; M.S., Ph.D., Rutgers, The State University of New Jersey
- Navabi, Faye** (1997), Lecturer of Computer Science and Engineering; B.S., M.S., University of Southwestern Louisiana
- Neal, Berna E.** (1988), Librarian Emerita; B.A., M.L.S., Syracuse University
- Nebeker, Helen E.** (1958), Professor Emerita of English; B.A., M.A., Arizona State University
- Neff, Patricia M.** (1987), Associate Professor of Family and Human Development; Interim Director, African American Studies; B.S., M.Ed., Iowa State University; Ph.D., Oklahoma State University
- Neisewander, Janet L.** (1991), Professor of Psychology; B.S., Rockford College; M.S., Ph.D., University of Kentucky
- Nelsen, Edward A.** (1975), Professor Emeritus of Educational Psychology; B.S., University of Wisconsin, Madison; Ph.D., Stanford University
- Nelson, Ben A.** (1995), Professor of Anthropology; B.A., M.A., Florida State University; Ph.D., Southern Illinois University
- Nelson, G. Lynn** (1973), Associate Professor of English; B.A., Kearney State College; Ph.D., University of Nebraska, Lincoln
- Nelson, J. Russell** (1981), Professor Emeritus of Finance; President Emeritus of the University; B.A., Pacific Union College; M.B.A., Ph.D., University of California, Los Angeles
- Nelson, John C.** (1967), Professor Emeritus of Curriculum and Instruction; B.S., M.A., Arizona State University; Ph.D., Vanderbilt University
- Nelson, Kelly** (1999), Senior Lecturer of Interdisciplinary Studies; B.A., Michigan State University; M.S., University of Southern Maine; Ph.D., Brandeis University
- Nelson, Margaret** (1995), Professor of Anthropology; Associate Dean, the Barrett Honors College; B.A., Occidental College, Los Angeles; Ph.D., University of California, Santa Barbara
- Nemeroff, Carol** (1988), Associate Professor of Psychology; B.A., McGill University (Canada); M.A., Ph.D., University of Pennsylvania
- Nemiro, Jay S.** (1995), Adjunct Professor of Life Sciences; B.A., Temple University; M.D., George Washington University School of Medicine
- Nering, Evar D.** (1960), Professor Emeritus of Mathematics and Statistics; B.A., Indiana University, Fort Wayne; M.A., Ph.D., Princeton University
- Neuberg, Steven L.** (1988), Professor of Psychology; A.B., Cornell University; M.S., Ph.D., Carnegie Mellon University
- Neuer, Susanne** (2000), Assistant Research Professor of Life Sciences; B.S., Kiel University (Germany); M.S., University of Washington; Ph.D., Oregon State University
- New, Frances Y.** (1986), Librarian Emerita; B.S., Seattle Pacific University; M.L.S., University of Arizona
- Newfeld, Stuart J.** (1997), Assistant Professor of Life Sciences; B.S., Hobart College; M.A., M.S., University of Hawaii; Ph.D., Emory University
- Newman, Nathan** (2000), Professor of Materials Engineering; B.S., University of Southern California; M.S., Ph.D., Stanford University
- Newman, Timothy J.** (2002), Associate Professor of Physics and Astronomy; B.A., University of Oxford (United Kingdom); Ph.D., University of Manchester (United Kingdom)
- Newport, Mark** (2001), Associate Professor of Art; B.F.A., Kansas City Art Institute; M.F.A., Art School of the Art Institute of Chicago
- Ney, James W.** (1969), Professor Emeritus of English; B.A., M.A., Wheaton College; Ed.D., University of Michigan
- Nichols, Ann W.** (1970), Associate Professor of Social Work; A.B., Stanford University; M.S.W., D.S.W., Columbia University
- Nichols, Renea D.** (1995), Lecturer of Journalism and Mass Communication; B.A., Central Michigan University; M.M.C., Arizona State University
- Nickel, James** (2002), Professor of Law; B.A., Tabor College; Ph.D., University of Kansas
- Nicolaenko, Basil** (1989), Professor of Mathematics and Statistics; M.S., University of Paris (France); Ph.D., University of Michigan
- Nielsen, Michael J.** (1969), Professor Emeritus of Design; B.P.D., North Carolina State University, Raleigh; M.A., Stanford University
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- Peles, Joseph** (1997), Adjunct Professor of Bioengineering; B.E., Vanderbilt University; M.S., Ph.D., Arizona State University
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- Perrill, Norman K.** (1966), Professor Emeritus of Communication; B.S., M.A., Northwestern University; Ph.D., University of Southern California
- Perry, Curtis** (1995), Associate Professor of English; B.A., Cornell University; M.A., Ph.D., Harvard University
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- Perry, R. Tod** (1998), Assistant Professor of Finance; B.B.A., University of Notre Dame; J.D., University of Virginia; Ph.D., University of North Carolina, Chapel Hill
- Perry, Ronald W.** (1983), Professor of Public Affairs; B.Sc., M.A., Arizona State University; Ph.D., University of Washington
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- Peterman, Gordon G.** (1966), Professor Emeritus of Construction; B.S.C.E., University of Iowa
- Peters, Kathleen A.** (1967), Professor Emerita of Family and Human Development; B.S., M.S., Kansas State University
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- Petersen, Michael** (2001), Assistant Professor of Accountancy; B.S., M.B.A., M.ACC., Brigham Young University; Ph.D., University of Iowa
- Petersen, Michelle C.** (1997), Lecturer of Spanish; B.A., Western Illinois University; M.A., University of Iowa
- Peterson, John R.** (1963), Professor Emeritus of Architecture; Graduate Coordinator of School of Architecture; B.A., St. Olaf College; B.Arch., University of Minnesota, Twin Cities; M.Arch., Harvard University
- Peterson, Ralph** (1976), Professor Emeritus of Curriculum and Instruction; B.A., Eastern Washington State College; M.A., Ed.D., Columbia University
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Rangtusanatham, Manus (Johnny) (1998). Associate Professor of Supply Chain Management; Director, W. P. Carey M.B.A. Online Program; B.S., Birmingham-Southern College; Ph.D., University of Minnesota

Rankin, Robert L. (1971). Professor Emeritus of Engineering; B.S., University of Texas, El Paso; Ph.D., William Marsh Rice University

Rankin, W. Parkman (1982). Professor Emeritus of Journalism and Mass Communication; B.S., Syracuse University; M.B.A., Ph.D., New York University

Rapp, James R. (1962). Professor Emeritus of Architecture; Associate Dean, College of Architecture and Environmental Design; B.Arch., University of Detroit; M.S.Arch., Columbia University

Ratner, Esther (1988). Associate Professor of Design; B.F.A., Washington University; M.F.A., University of Michigan

Raupp, Gregory B. (1985). Professor of Chemical Engineering; Associate Vice President for Research and Economic Affairs; B.S., M.S., Purdue University; Ph.D., University of Wisconsin, Madison

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- Rausch, Jack D.** (1965), Professor Emeritus of Music; B.S., M.A., Ohio State University
- Rave, Wallace J.** (1967), Professor Emeritus of Music; B.S., Illinois State University; M.M., Ph.D., University of Illinois
- Ravesloot, John C.** (1993), Adjunct Professor of Anthropology; B.A., M.A., Ph.D., Southern Illinois University, Carbondale
- Ravindran, Suryanarayanan** (2001), Assistant Professor of Computer Information Systems; B.A., Indian Institute of Technology (India); M.B.A., Indian Institute of Management (India); Ph.D., University of Texas, Austin
- Rawls, J. Alan** (1997), Associate Professor of Life Sciences; B.S., University of Western Ontario (Canada); Ph.D., Saint Louis University
- Ray, Timothy E.** (1998), Lecturer of English; B.A., M.A., University of Central Oklahoma; Ph.D., Bowling Green State University
- Ray, Tushar** (2001), Adjunct Professor of Life Sciences; B.S., M.S., Ph.D., University of Calcutta (India)
- Ray, William J.** (1968), Professor Emeritus of Curriculum and Instruction; B.S., M.S., State University of New York, Buffalo; Ed.D., Wayne State University
- Rayle, Andrea Dixon** (2002), Assistant Professor of Counseling Psychology; B.A., M.A., University of North Carolina, Charlotte; Ph.D., University of North Carolina, Greensboro
- Razatos, Anneta** (1999), Assistant Professor of Chemical Engineering; B.S., University of Colorado, Boulder; Ph.D., University of Texas, Austin
- Read, Anne-Marie** (2002), Assistant Professor of Educational Leadership and Policy Studies; B.A., State University of New York, New Paltz; M.S., State University of New York, Oswego; Ph.D., University of North Carolina, Chapel Hill
- Reader, Mark** (1967), Professor Emeritus of Political Science; A.B., A.M., Ph.D., University of Michigan
- Reber, William** (1991), Professor of Music; Director, Music Theatre Program; B.M., M.M., University of Utah; D.M.A., University of Texas, Austin
- Reckers, Philip M.J.** (1980), Professor of Accountancy; B.S., Quincy College; M.B.A., Washington University; Ph.D., University of Illinois
- Redman, Betsy J.** (1988), Associate Librarian; Team Management, Technical Services Department; B.S., M.L.S., University of Arizona
- Redman, Charles L.** (1983), Professor of Anthropology; Director, Center for Environmental Studies; B.A., Harvard University; M.A., Ph.D., University of Chicago
- Reed, Helen** (1985), Professor of Mechanical and Aerospace Engineering; Vice Chair, Graduate Programs in Mechanical and Aerospace Engineering; A.B., Goucher College; M.S., Ph.D., Virginia Polytechnic Institute and State University
- Reed, Kaye E.** (1997), Associate Professor of Anthropology; Research Associate, Institute of Human Origins; B.S., Portland State University; M.A., Ph.D., State University of New York, Stony Brook
- Rees, Ellen** (1996), Associate Professor of Languages and Literatures; B.A., Evergreen State College; M.A., Ph.D., University of Washington
- Reeves, Henry C.** (1969), Professor Emeritus of Life Sciences; B.S., Franklin and Marshall College; M.A., Ph.D., Vanderbilt University
- Reffett, Kevin L.** (1995), Associate Professor of Economics; B.B.A., M.A., University of Iowa; Ph.D., Purdue University
- Regier, Philip R.** (1987), Associate Professor of Accountancy; Interim Dean, W. P. Carey School of Business; Director, Business Honors Program; Associate Dean, Undergraduate Programs, W. P. Carey School of Business; B.A., St. John's College; Ph.D., University of Illinois
- Reich, John W.** (1965), Professor of Psychology; B.A., M.S., University of Oklahoma; Ph.D., University of Colorado
- Reif, William E.** (1970), Professor Emeritus of Management; B.B.A., M.A., Ph.D., University of Iowa
- Reiman, Etsuko Obata** (1978), Associate Professor of Japanese; B.A., Keio University (Japan); M.A., Seton Hall University; M.A., Ph.D., University of Wisconsin, Madison
- Reingen, Peter H.** (1982), Davis Distinguished Research Professor of Marketing; B.B.A., Cologne College (Germany); M.B.A., Ph.D., University of Cincinnati
- Reiser, Castle O.** (1958), Professor Emeritus of Chemical Engineering; B.S., Colorado State University; Pet.E., Colorado School of Mines; Ph.D., University of Wisconsin, Madison
- Reiser, Mark R.** (1988), Associate Professor of Economics; B.S., University of Michigan; Ph.D., University of Chicago
- Reiss, Peter W.** (1976), Professor Emeritus of Business Administration; B.S., Marquette University; M.A., Arizona State University; J.D., Marquette University
- Reisslein, Martin** (2000), Assistant Professor of Electrical Engineering; M.S., Ph.D., University of Pennsylvania
- Reiter, Wellington** (2003), Professor of Architecture; Dean, College of Architecture and Environmental Design; B.S.D., Tulane University; M.Arch., Harvard University
- Renaut, Rosemary** (1987), Professor of Mathematics and Statistics; Director, Computational Biosciences Program; B.S., Durham University; Ph.D., University of Cambridge (United Kingdom)
- Reneau, J. Hal** (1975), Professor Emeritus of Accountancy; B.B.A., M.S., Texas Tech University; Ph.D., University of Missouri, Columbia
- Reuter, Vincent G.** (1961), Professor Emeritus of Operations Management; B.S.C., M.A., Ph.D., University of Iowa
- Reyes, Angelita** (2002), Professor of African American Studies and Women's Studies; B.A., City University of New York; M.A., New York University; Ph.D., University of Iowa
- Reyes, Guillermo** (1996), Associate Professor of Theatre; B.A., University of California, Los Angeles; M.F.A., University of California, San Diego
- Reynolds, Richard** (2002), Lecturer of Mathematics and Statistics; B.S., New Mexico Institute of Mining and Technology; M.S., Ph.D., New Mexico State University
- Reynolds, Robert D.** (1970), Professor Emeritus of Music; B.M., Texas Christian University; M.M., University of Texas, Austin; Ph.D., Ohio State University
- Reynolds, Stephen J.** (1991), Professor of Geological Sciences; B.S., University of Texas, El Paso; M.S., Ph.D., University of Arizona
- Reynolds, Steven L.** (1988), Associate Professor of Philosophy; Interim Chair, Department of Philosophy; B.A., University of Chicago; M.A., Ph.D., University of California, Los Angeles
- Rez, Peter** (1985), Professor of Physics and Astronomy and Solid State Science; B.A., University of Cambridge (United Kingdom); Ph.D., University of Oxford (United Kingdom)

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Reznikoff, Sivan C. (1973), Professor Emerita of Design; Certificate, New York School of Interior Design; B.A., University of Southwestern Louisiana; M.A., Louisiana State University, Baton Rouge

Rhoads, David M. (2000), Assistant Professor of Life Sciences; B.S., Pennsylvania State University; Ph.D., Michigan State University

Rhodes, Jewell Parker (1997), Professor of English; B.A., M.A., D.A., Carnegie Mellon University

Ribic, Catherine (2000), Adjunct Professor of Anthropology; B.A., M.A., Ph.D., Arizona State University

Rice, Glen E. (1986), Associate Professor of Anthropology; Director, Office of Cultural Resource Management; B.A., Reed College; M.A., Ph.D., University of Washington

Rice, Warren (1958), Professor Emeritus of Engineering; B.S., M.S., Ph.D., Texas A&M University

Richa, Andrea W. (1998), Assistant Professor of Computer Science and Engineering; B.Sc., M.Sc., Federal University of Rio de Janeiro (Brazil); M.Sc., Ph.D., Carnegie Mellon University

Richard, Thelma Shinn (1975), Professor Emerita of English; B.A., Central Connecticut State College; M.A., Ph.D., Purdue University

Richards, Gale L. (1965), Professor Emeritus of Communication; B.A., University of Akron; M.A., Ph.D., University of Iowa

Richards, Mary L. (1978), Professor Emerita of Nursing; B.S.N., M.S., DePaul University; Ph.D., Texas Women's University

Richardson, Deane E. (1970), Professor Emeritus of Kinesiology; B.S., Bradley University; M.A., Ed.D., Stanford University

Richardson, Jeanne (1985), Librarian; Team Leader, Collection Development; B.A., Lawrence University; M.S., M.L.S., Columbia University

Richardson, Richard C. Jr. (1977), Professor Emeritus of Higher Education; B.S., Castleton State College; M.S., Michigan State University; Ph.D., University of Texas, Austin

Richert, Ranko (1999), Assistant Professor of Chemistry and Biochemistry; Ph.D., Philipps University, Marburg (Germany)

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Riding In, James (1990), Associate Professor of Justice Studies; B.A., Fort Lewis College; M.A., Ph.D., University of California, Los Angeles

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(1982)

Regents' and Katherine C. Turner Professor of English; B.A., M.F.A., University of Arizona

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Risseuw, John L. (1980), Professor of Art; B.S., M.A., M.F.A., University of Wisconsin, Madison

Ritchie, Barry G. (1984), Professor of Physics and Astronomy; Chair, Department of Physics and Astronomy; B.S., Appalachian State University; M.S., Ph.D., University of South Carolina

Rivera, Daniel E. (1990), Associate Professor of Chemical Engineering; B.S., University of Rochester; M.S., University of Wisconsin, Madison; Ph.D., California Institute of Technology

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Roanhorse-Dineyazhe, Maxine (2003), Faculty Associate of Curriculum and Instruction; B.A., M.Ed., Ed.D., Arizona State University

Robbins, Earl R. (1961), Professor Emeritus of Computer Science; B.S.E.E., Texas Technological College; M.S.E., Ph.D., Arizona State University

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Roberts, Carolyn (1982), Professor Emerita of Nursing; B.S.N., University of Western Ontario (Canada); M.Ed., Columbia University; Ph.D., Wayne State University

Roberts, Chell A. (1989), Associate Professor of Industrial Engineering; Director of Engineering Program Development; B.A., M.S., University of Utah; Ph.D., Virginia Polytechnic Institute and State University

Roberts, Lauren C. (1984), Clinical Associate Professor of Life Sciences; B.S., Saint Norbert College; M.S., University of Illinois

Roberts, Nancy H. (1980), Senior Lecturer of Economics; B.A., University of Texas, Arlington; M.S., Ph.D., Arizona State University

Roberts, Thomas G. (1970), Professor Emeritus of Curriculum and Instruction; B.A., Wake Forest University; M.A., Ph.D., University of North Carolina, Chapel Hill

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ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- Robinette, Martin** (2000), Adjunct Professor of Speech and Hearing Science; B.S., M.S., University of Utah; Ph.D., Wayne State University
- Robinson, Dahlia M.** (2000), Assistant Professor of Accountancy; B.S., M.S., University of the West Indies (Barbados); M.S., Pennsylvania State University; Ph.D., University of Georgia
- Robinson, Helene M.** (1967), Professor Emerita of Music; B.A., University of Oregon; M.M., Northwestern University
- Robinson Kurpius, Sharon E.** (1978), Professor of Counseling Psychology and Counselor Education; B.S., M.S., University of Wisconsin, LaCrosse; Ph.D., Indiana University, Bloomington
- Rockmaker, Jody** (1997), Associate Professor of Music; B.M., New England Conservatory, Boston; M.F.A., Ph.D., Princeton University
- Rodriguez, Armando** (1990), Associate Professor of Electrical Engineering; B.S., Polytechnic Institute of New York, Brooklyn; M.S., Ph.D., Massachusetts Institute of Technology
- Rody, Joseph** (1994), Senior Lecturer of Mathematics and Statistics; B.S., M.S., University of Akron
- Roe, Sue** (2000), Faculty Associate of Nursing; B.S.N., M.S., University of Arizona; D.P.A., Arizona State University
- Roedel, Ronald J.** (1981), Professor of Electrical Engineering; Associate Dean, Academic Affairs, Ira. A. Fulton School of Engineering; Director, Engineering Core and Special Studies; B.S.E., Princeton University; M.S., Ph.D., University of California, Los Angeles
- Roen, Duane** (1995), Professor of English; Director, Center for Learning and Teaching Excellence; B.S., M.S., University of Wisconsin, River Falls; Ph.D., University of Minnesota, Minneapolis
- Rogers, Joseph** (1988), Adjunct Professor of Life Sciences; B.A., Emory University; Ph.D., University of California, San Diego
- Rogers, Rodney** (1987), Professor of Music; B.M., University of Iowa; M.M., Arizona State University; Ph.D., University of Iowa
- Rogerson, Richard** (2001), Rondthaler Professor of Economics; B.Sc., University of Alberta (Canada); Ph.D., University of Minnesota
- Roher, Alex E.** (1997), Adjunct Professor of Life Sciences; M.D., National University of Mexico School of Medicine; Ph.D., University of Cambridge (United Kingdom)
- Rollins, George, Major** (2000), Assistant Professor of Military Science; B.A., St. Leo College
- Rolstad, Kellie** (1999), Assistant Professor of Curriculum and Instruction; B.A., M.A., Ph.D., University of California, Los Angeles
- Romero, Mary** (1995), Professor of Justice Studies; B.A., Regis College; Ph.D., University of Colorado
- Romeyn, Esther** (1998), Assistant Professor of Interdisciplinary Humanities; B.A., M.A., University of Amsterdam (Netherlands)
- Roosa, Mark W.** (1980), Professor of Family and Human Development; B.S., Ohio State University; M.A., Ph.D., Michigan State University
- Rosa, John P.** (2000), Assistant Professor of Asian Pacific American Studies; B.A., Northwestern University; M.A., Ph.D., University of California, Irvine
- Rosales, F. Arturo** (1980), Professor of History; B.A., Arizona State University; M.A., Stanford University; Ph.D., Indiana University, Bloomington
- Rosdahl, Dana** (1994), Faculty Associate of Nursing; B.S.N., Montana State University; M.S., Arizona State University; Ph.D., University of Arizona
- Rose, Jonathan** (1968), Professor of Law; B.A., University of Pennsylvania; LL.B., University of Minnesota, Twin Cities
- Rose, Seth D.** (1976), Professor of Chemistry and Biochemistry; B.S., University of California, Berkeley; Ph.D., University of California, San Diego
- Rosen, Bernice M.** (1986), Instructional Professional Emerita; B.A., Brooklyn College; M.A., New York University
- Rosen, Seymour L.** (1986), Professor Emeritus of Music; Dean Emeritus, Herberger College of Fine Arts; B.S., The Juilliard School
- Rosenberg, Michael** (2003), Assistant Professor of Life Sciences; B.A., Northwestern University; Ph.D., State University of New York, Stony Brook
- Rosier, Kathlene** (2000), Director, Indian Legal Program; B.A., Capital University; J.D., University of Utah
- Ross, Katherine B.** (2002), Adjunct Professor of Speech and Hearing Science; B.A., University of North Carolina, Chapel Hill; M.S., Ph.D., Vanderbilt University
- Rossi, Patrick J.** (1967), Professor Emeritus of Psychology; B.S., Saint Mary's College; M.A., San Fernando Valley State College; Ph.D., University of California, Riverside
- Rothschild, Mary L.** (1975), Professor of History and Women's Studies; Director, Women's Studies Program; B.A., M.A., Ph.D., University of Washington
- Rothstein, Paul** (1998), Associate Professor of Design; B.F.A., University of Wisconsin-Stout, Menomonie; M.D., Illinois Institute of Technology
- Rotondi, Michael** (1999), Professor of Architecture; Dipl. Arch., Southern California Institute of Architecture
- Rountree-Antar, Michele** (1999), Academic Professional, School of Social Work; Assistant Coordinator of Field Education, School of Social Work; B.A., University of Arizona; M.S.W., Boston University
- Roussinov, Dmitri** (2001), Assistant Professor of Computer Information Systems; B.S., M.S., Moscow Institute of Physics and Technology (Russia); M.A., Indiana University, Bloomington; Ph.D., University of Arizona
- Rowe, Casey** (2001), Assistant Professor of Accountancy; B.S., Northern Arizona University; M.S., San Diego State University; Ph.D., University of Pittsburgh
- Rowe, Kenneth L.** (1962), Professor Emeritus of Marketing; B.A., M.A., Northern Iowa University; Ph.D., Michigan State University
- Roy, Asim** (1983), Professor of Computer Information Systems; B.E., Calcutta University (India); M.S., Case Western Reserve University; Ph.D., University of Texas, Austin
- Roy, Ramendra P.** (1981), Professor of Engineering; B.Sc., University of Calcutta (India); M.S., University of Washington; M.Sc., Ph.D., University of California, Berkeley
- Ruch, William A.** (1968), Professor Emeritus of Management; B.S., M.B.A., D.B.A., Indiana University, Bloomington
- Ruedemann, Richard** (1997), Senior Lecturer of Mathematics and Statistics; B.S., M.A., Arizona State University; Ph.D., University of South Florida
- Ruiz, Ester** (1986), Associate Professor of Nursing; B.S.N., M.S., Ph.D., Arizona State University
- Rummel, John R.** (1975), Professor Emeritus of Architecture; B.A., M.S., Stanford University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Rund, James A. (2001), Associate Professor of Educational Leadership and Policy Studies; Vice President, Undergraduate University Initiatives; B.A., Moorehead State University; M.S., North Dakota State University; Ed.D., Arizona State University

Runger, George (1996), Professor of Industrial Engineering; B.S., Cornell University; Ph.D., University of Minnesota

Ruppert, K.D. (1976), Research Specialist Emeritus of Geography; B.S.E.E., University of Iowa

Rush, James (1990), Associate Professor of History; Director, Program for Southeast Asian Studies; B.A., Gettysburg College; M.A., Ph.D., Yale University

Russell, Dennis E. (1991), Associate Professor of Journalism and Mass Communication; B.S., M.M.C., Arizona State University; Ph.D., University of Utah

Russell, Paul E. (1967), Professor Emeritus of Electrical Engineering; B.S.E.E., B.S.M.E., New Mexico A&M University; M.S.E.E., Ph.D., University of Wisconsin, Madison; P.E.

Russell, Scott C. (1990), Adjunct Professor of Anthropology; B.A., University of New Mexico; M.A., Ph.D., Arizona State University

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Rutherford, Robert B. Jr. (1976), Professor of Curriculum and Instruction; Director, Interdisciplinary Ph.D. Program in Curriculum and Instruction; Associate Director of Research and Graduate Education, Division of Curriculum and Instruction; B.S., M.Ed., University of Virginia; Ed.S., Ph.D., Vanderbilt University

Rutowski, Kathleen (2001), Lecturer of Curriculum and Instruction; B.A., University of California, Santa Cruz; M.A., San Francisco State University; Ph.D., Arizona State University

Rutowski, Ronald L. (1976), Professor of Life Sciences; Associate Director, School of Life Sciences Undergraduate Program; B.A., University of California, Santa Cruz; Ph.D., Cornell University

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Sacks, Benjamin (1963), Professor Emeritus of History; B.A., University of New Mexico; M.A., McGill University (Canada); Ph.D., Stanford University

Sackton, Frank J. (1976), Professor Emeritus of Public Affairs; B.S., University of Maryland, College Park; M.P.A., Doctor of Humane Letters, Arizona State University

Sadalla, Edward K. (1974), Professor of Psychology; B.A., University of California, Berkeley; Ph.D., Stanford University

Saenz, Delia S. (1989), Associate Professor of Psychology; B.A., Pan American University; M.A., Ph.D., Princeton University

Sager, Harvey M. (1977), Librarian Emeritus; B.A., San Francisco State College; M.A., California State University, Chico; M.A., University of Denver

Saks, Michael (2000), Professor of Law; B.A., B.S., Penn State University; M.S.L., Yale University; M.A., Ph.D., Ohio State University

Saldaña, Johnny (1981), Professor of Theatre; B.F.A., M.F.A., University of Texas, Austin

Salerno, Nicholas A. (1961), Professor Emeritus of English; B.A., M.A., Arizona State University; Ph.D., Stanford University

Saltz, Charlene (2000), Academic Associate, Environmental Education Coordinator, Center for Environmental Studies; B.A., Emory University; M.S., Antioch New England Graduate School

Salvatore, Joseph Raphael (1998), Adjunct Professor of Life Sciences; M.D., Autonomous University of Guadalajara (Mexico)

Salvucci, Michael E. (1995), Adjunct Professor of Life Sciences; B.S., Pennsylvania State University; M.S., Ph.D., University of Florida

Samuelson, Hava Tirosh (1999), Associate Professor of History; B.A., State University of New York, Stony Brook; Ph.D., Hebrew University of Jerusalem (Israel)

Samuelson, Norbert M. (1998), Professor of Religious Studies; Harold and Jean Grossman Chair in Jewish Studies; B.A., Northwestern University; B.H.L., M.H.L., Hebrew Union College Jewish Institute of Religion; Ph.D., Indiana University

Sanchez, Angel (1990), Associate Professor of Languages and Literatures; Licenciatura, Complutense University (Spain); M.A., University of Minnesota, Twin Cities; Ph.D., University of Minnesota, Minneapolis

Sanders, Bevie T. (1957), Professor Emeritus of Accountancy; B.B.A., North Texas State University; M.S., Texas A&M University; Ph.D., University of Texas; C.P.A., Arizona, Texas



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(1970)

Regents' Professor of Psychology; B.A., Brooklyn College; Ph.D., University of Rochester

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Sanft, Alfred C. (1990), Associate Professor of Design; B.F.A., Brigham Young University; M.F.A., Basel School of Design (Switzerland)

Sankey, Otto F. (1982), Professor of Physics and Astronomy; B.S., University of Missouri, St. Louis; M.S., Ph.D., Washington University

Sansone, Fred J. (1965), Professor Emeritus of Mathematics and Statistics; B.S.E., M.S.E., University of Michigan; M.S., Ph.D., Rutgers, The State University of New Jersey

Santanam, Raghu (1998), Assistant Professor of Computer Information Systems; B.E., National Institute of Engineering (India); M.S., Indian Institute of Technology (India); M.S., Ph.D., State University of New York, Buffalo

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- Santello, Marco** (1999), Assistant Professor of Kinesiology; B.Sc., Higher Institute of Physical Education (Italy); M.Phil., Ph.D., University of Birmingham (United Kingdom)
- Santorico, Ann** (2003), Academic Associate, Division of Undergraduate Academic Services; Academic Advisor; B.A., University of Phoenix; M.Ed., Arizona State University
- Santos, Manuel** (1999), Professor of Economics; Licenciatura, Autonomous University of Madrid (Spain); M.A., Ph.D., University of Chicago
- Santos de Barona, Maryann** (1989), Professor of Psychology in Education; B.S., City University of New York; M.A., Ph.D., University of Texas, Austin
- Sargent, Charles S. Jr.** (1971), Professor Emeritus of Geography; B.A., University of Wyoming; M.A., Ph.D., University of California, Berkeley
- Saric, William** (1984), Professor of Engineering; B.S., Illinois Institute of Technology; M.S., University of New Mexico; Ph.D., Illinois Institute of Technology
- Sarjoughian, Hessam S.** (2001), Assistant Professor of Computer Science and Engineering; B.S., Mississippi State University; M.S., Ph.D., University of Arizona
- Sater, Vernon E.** (1962), Professor Emeritus of Chemical Engineering; B.S.Ch.E., M.S.Ch.E., Ph.D., Illinois Institute of Technology
- Satterlie, Richard A.** (1980), Professor of Life Sciences; B.A., Sonoma State University; Ph.D., University of California, Santa Barbara
- Satterthwaite, Lester L. Jr.** (1968), Professor Emeritus of Educational Media and Computers; B.S., M.S., Ed.D., Indiana University, Bloomington
- Sattler, Howard E.** (1967), Professor Emeritus of Education; B.S., M.S., Ph.D., Arizona State University
- Saubolle, Michael** (1995), Adjunct Professor of Life Sciences; B.S., Ph.D., University of California, Davis
- Savage, Nevin W.** (1959), Professor Emeritus of Mathematics and Statistics; B.S., M.A., Pennsylvania State University; Ph.D., University of California, Los Angeles
- Savage, Stephen H.** (1998), Adjunct Professor of Anthropology; B.A., Cincinnati Bible Seminary; M.A., University of South Carolina; Ph.D., Arizona State University
- Savard, Jeannine A.** (1990), Associate Professor of English; B.S., State University of New York, Plattsburg; M.A., University of New Hampshire
- Savenye, Wilhelmina C.** (1991), Associate Professor of Psychology in Education; Academic Program Leader, Educational Technology; B.A., University of Washington; M.Ed., Ph.D., Arizona State University
- Sawhney, Anil** (1999), Associate Professor of Construction; B.S.E., Institution of Engineers (India); M.S., School of Planning and Architecture (India); Ph.D., University of Alberta (Canada)
- Sayles, Judy** (1997), Clinical Assistant Professor of Nursing; B.S.N., University of Michigan; M.S., Arizona State University
- Schabacker, Joseph C.** (1963), Professor Emeritus of Management; B.S., Temple University; M.B.A., Ph.D., University of California, Los Angeles
- Schade, Thomas V.** (1974), Professor Emeritus of Justice Studies; B.A., Hope College; M.A., Ph.D., Western Michigan University
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- Scheck, Adrienne C.** (1997), Adjunct Professor of Life Sciences; B.A., University of Rochester; Ph.D., Rensselaer Polytechnic Institute
- Scheiner, Georganne** (1983), Associate Professor of Women's Studies; B.A., Ithaca College; M.A., University of Western Ontario (Canada); Ph.D., Arizona State University
- Scheiner, Samuel M.** (2000), Adjunct Professor of Life Sciences; B.S., M.S., Ph.D., University of Chicago
- Schexnayder, Clifford J.** (1994), Visiting Eminent Scholar Emeritus of Construction; B.C.E., M.S.C.E., Georgia Institute of Technology; Ph.D., Purdue University
- Schildkret, David** (2002), Professor of Music; B.A., Rutgers, The State University of New Jersey, New Brunswick; M.M., D.M.A., Indiana University School of Music, Bloomington
- Schlacter, John L.** (1969), Professor Emeritus of Marketing; B.B.A., Case Western Reserve University; M.B.A., Ph.D., Ohio State University
- Schlee, Edward E.** (1990), Professor of Economics; B.A., North Texas State University; M.S., Ph.D., University of Illinois
- Schleif, Corine** (1988), Associate Professor of Art; B.A., Concordia College; M.A., Washington University; Ph.D., University of Bamberg (Germany)
- Schleifer, Thomas** (2001), Visiting Eminent Scholar of Construction; B.S., M.S., East Carolina University; Ph.D., Heriot-Watt University
- Schmeackle, Mark W.** (2003), Assistant Professor of Geography; B.S., M.S., University of Washington; Ph.D., University of Colorado, Boulder
- Schmid, Maureen** (1990), Associate Research Scientist; Director, Tandem Translation Project; B.A., Saint Mary's College of Notre Dame; M.A., University of Notre Dame; Ph.D., State University of New York, Buffalo
- Schmidt, Jean M.** (1966), Professor of Life Sciences; Associate Director, Cancer Research Institute; B.A., M.S., University of Iowa; Ph.D., University of California, Berkeley
- Schmidt, Kevin E.** (1989), Professor of Physics and Astronomy; A.B., Washington University; M.S., Ph.D., University of Illinois
- Schmidt, Margaret** (2001), Assistant Professor of Music; B.M.E., Lawrence University; M.M., State University of New York, Stony Brook; Ph.D., University of Michigan
- Schmidt, Randall B.** (1968), Professor of Art; B.A., Hamline University; M.A., University of New Mexico
- Schmidt, Sherrie** (1990), University Librarian and Dean; B.A., Ohio State University; M.L.S., Emory University
- Schneberger, Lois I.** (1969), Librarian Emerita; B.A., Viterbo College; M.L.S., Emporia State University
- Schneider, Anne L.** (1989), Professor of Justice Studies; Dean, College of Public Programs; B.A., M.A., Oklahoma State University; Ph.D., Indiana University, Bloomington
- Schneider, Elizabeth** (2002), Assistant Professor of Art; B.A., University of Michigan; B.F.A., Art Institute of Chicago; M.F.A., Mills College
- Schneller, Eugene S.** (1985), Professor of Health Administration and Policy; B.A., Post College; Ph.D., New York University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- Schober, Juliane** (1991), Associate Professor of Religious Studies; B.A., University of Northern Colorado; M.A., Ph.D., University of Illinois
- Schoebel, Henry L.** (1990), Professor of Art; B.F.A., Syracuse University; M.F.A., University of Maryland, College Park
- Schoenhoff, Molly** (2002), Assistant Professor of Design; B.S., University of Cincinnati; M.F.A., Rhode Island School of Design
- Schoenwetter, James** (1967), Professor Emeritus of Anthropology; A.B., University of Chicago; M.S., University of Arizona; Ph.D., Southern Illinois University
- Schroder, Dieter K.** (1981), Professor of Electrical Engineering; Codirector, Center for Low Power Electronics Research; B.S.E.E., M.S.E.E., McGill University (Canada); Ph.D., University of Illinois
- Schroeder, Milton R.** (1969), Professor of Law; B.A., Wesleyan University; J.D., University of Chicago
- Schuback, Gertrud B.** (1966), Professor Emerita of German; B.A., M.A., Arizona State University
- Schultz, Joseph J.** (1983), Professor of Accountancy; B.S., M.B.A., Mississippi State University; Ph.D., University of Texas, Austin; C.P.A., Mississippi
- Schuring, Martin** (1992), Associate Professor of Music; B.M., Curtis Institute of Music; M.A., Arizona State University
- Schutte, Jerry** (1988), Associate Professor of Art; B.A., Fort Hays State University; M.F.A., Arizona State University
- Schwalbe, Carol** (2002), Assistant Professor of Journalism and Mass Communication; B.A., Smith College; M.A., George Washington University
- Schwalm, David E.** (1986), Associate Professor of English; Dean, East College, Vice Provost of Arizona State University East; B.A., Carleton College; M.A., Ph.D., University of Chicago
- Schwartz, Andrew B.** (1993), Research Professor of Bioengineering; B.A., Ph.D., University of Minnesota
- Schwenke, Dawn C.** (2002), Associate Research Professor of Health Administration and Policy; B.A., Whitman College; M.S., Wake Forest University; Ph.D., Cornell University
- Scoggin, Janet** (1989), Professor Emerita of Nursing; B.S.N., University of Portland; M.S., Ph.D., Arizona State University
- Scott, Mark C.** (2003), Assistant Librarian, University Libraries, Government Documents and Maps; B.A., LeMoyne College; M.I.S., University of Albany
- Scowen, Paul A.** (1992), Assistant Research Professor of Physics and Astronomy; B.S., University of Birmingham (United Kingdom); M.S., Ph.D., Rice University
- Searfoss, Lyndon W.** (1973), Professor Emeritus of Curriculum and Instruction; B.S., West Chester State College; M.A., Ph.D., Syracuse University
- Sears, Robert L.** (1986), Senior Research Administrator Emeritus, Center for Energy Systems Research; B.S., U.S. Military Academy; M.S.E., Arizona State University
- Seaton, Helen J.** (1987), Librarian Emerita, Noble Science Reference Services; B.A., Rutgers. The State University of New Jersey; M.L.S., University of Missouri, Columbia
- Segal, Elizabeth A.** (1995), Professor of Social Work; B.A., Brandeis University; M.S.W., Boston University; Ph.D., University of Illinois, Chicago
- Segura, Joseph M.** (1979), Associate Professor of Art; B.A., M.F.A., Southern Illinois University, Carbondale
- Sehsted, Colene R.** (1967), Professor Emerita of Nursing; B.S.N., University of Arkansas, Fayetteville; M.S.N., University of Maryland, Baltimore
- Seipp, Kenneth F.** (1963), Professor Emeritus of Music; B.S., Hartwick College; M.M., University of Kansas; Mus.Ed.D., Indiana University, Bloomington
- Selkirk, Susan** (1977), Senior Research Professional of Geological Sciences; B.A., M.A., Arizona State University
- Sell, Susan** (1995), Adjunct Professor of Life Sciences; A.B., University of California, Berkeley; Ph.D., University of Utah Medical Center
- Sellheim, Eckart** (1989), Professor of Music; Concert Diploma, Cologne Academy of Music (Germany)
- Semken, Steven** (2003), Assistant Professor of Geological Sciences; B.S., Massachusetts Institute of Technology; M.S., University of California, Los Angeles; Ph.D., Massachusetts Institute of Technology
- Sen, Arunabha** (1986), Associate Professor of Computer Science and Engineering; Associate Chair for Graduate Programs, Department of Computer Science and Engineering; B.E., Jadavpur University (India); Ph.D., University of South Carolina
- Senner, Wayne M.** (1973), Professor Emeritus of German; B.A., Portland State University; M.A., University of Washington; Ph.D., University of Illinois
- Sensibar, Judith L.** (1985), Professor Emerita of English; B.A., Vassar College; M.A., Ph.D., University of Chicago
- Seo, Dong-Kyun** (2001), Assistant Professor of Chemistry and Biochemistry; B.S., M.S., Seoul National University (South Korea); Ph.D., North Carolina State University
- Serwint, Nancy J.** (1988), Associate Professor of Art; B.A., University of Illinois; M.A., University of Chicago; M.A., Ph.D., Princeton University
- Shackle, Linda A.** (1984), Librarian; Team Leader, Noble Science Reference Services; B.A., State University of New York, Oswego; M.L.S., State University of New York, Albany
- Shaeffer, J. Duncan** (2000), Lecturer of Geography; B.S., Brigham Young University; M.A., Ph.D., Arizona State University
- Shah, Jami** (1984), Professor of Engineering; B.S.M.E., University of Karachi (Pakistan); M.S., University of Pittsburgh; Ph.D., Ohio State University
- Shao, Benjamin** (1999), Assistant Professor of Computer Information Systems; B.S., M.S., National Chiao Tung University (Taiwan); Ph.D., State University of New York, Buffalo
- Shapiro, Joan Rankin** (1997), Adjunct Professor of Life Sciences; B.S., Westminster College; M.A., Hofstra University; Ph.D., Cornell University Medical College
- Sharer, Jon W.** (1975), Professor of Art; Director, School of Art; B.A., Roosevelt University; M.S., Illinois Institute of Technology; Ph.D., Ohio State University
- Sharma, Renu** (1985), Associate Research Scientist, Center for Solid State Science; B.S. B.Ed., Punjab University (India); M.S., Ph.D., University of Stockholm (Sweden)
- Sharp, Thomas** (1996), Associate Professor of Geological Sciences; B.S., University of Minnesota; M.S., Ph.D., Arizona State University
- Sharp, William P.** (1979), Senior Research Specialist of Life Sciences; B.A., University of Northern Iowa; M.S., Arizona State University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- Shaw, Milton C.** (1978), Professor Emeritus of Engineering; B.S.M.E., Drexel University; M.E.Sc., Sc.D., University of Cincinnati; Dr.H.C., University of Louvain (Belgium)
- Shearer, Nelma B.C.** (1993), Assistant Professor of Nursing; B.S., South Dakota State University; M.Ed., University of Missouri, St. Louis; M.S., Southern Illinois University, Edwardsville; Ph.D., University of Arizona
- Shearman, Harriett Joy** (1995), Professor Emerita of Nursing; B.S.N., University of Iowa; M.S., Boston University
- Shears, Brenda L.** (1987), Associate Research Administrator, Research Coordinator, Center for Environmental Studies; B.A., Arizona State University; M.A., Hunter College
- Shell, Leon G.** (1967), Professor Emeritus of Counselor Education; B.A., University of Colorado; A.M., Ed.D., University of Northern Colorado
- Shellans, Michael J.** (1992), Senior Lecturer of Music; B.M., University of Arizona; M.M., Arizona State University
- Shen, Jun** (1996), Professor of Electrical Engineering; B.S., South China University of Science and Technology; M.S., Texas Tech University; Ph.D., University of Notre Dame
- Sheppard, Douglas C.** (1971), Professor Emeritus of Spanish; B.A., Montana State University; M.A., Ph.D., University of Wisconsin, Madison
- Sherman, Thomas L.** (1964), Professor Emeritus of Mathematics and Statistics; B.A., University of California, Los Angeles; M.S., Ph.D., University of Utah
- Sheydayi, E. Yury** (1973), Professor Emeritus of Architecture; B.S.C.E., University of Arizona; M.S.C.E., Arizona State University
- Shimansky, Yuri** (2000), Assistant Research Professor of Bioengineering; M.S., Polytechnic Institute of Kiev (Ukraine); Ph.D., Institute of Physiology of Kiev (Ukraine)
- Shimomura, Tomoko** (2002), Lecturer of Japanese; B.A., Kwassui Women's College (Japan); M.A., Ohio State University
- Shinn, Randall A.** (1978), Professor of Music; B.A., Southwestern Oklahoma State University; M.M., University of Colorado; D.M.A., University of Illinois
- Shipp, Vernon E.** (1966), Professor Emeritus of Art; B.S., Grand Canyon College; M.A., Arizona State University
- Shiyakhtenko, Luda** (1993), Adjunct Professor of Life Sciences; M.S., Ph.D., Moscow Physical Technical Institute (Russia)
- Shock, Everett L.** (2002), Professor of Chemistry and Biochemistry and Geological Sciences; B.S., University of California, Santa Cruz; Ph.D., University of California, Berkeley
- Shrednick, Harvey R.** (1995), Senior Lecturer of Computer Information Systems; B.S., City College of New York; M.B.A., Baruch College
- Shriver, Keith A.** (1982), Professor Emeritus of Accountancy; B.S., Linfield College; M.S., Arizona State University; Ph.D., University of Texas, Austin; C.P.A., Arizona
- Shuman, I. Gayle** (1974), Professor Emeritus of Justice Studies; B.S., M.A., Ed.D., Arizona State University
- Shumway, John** (2001), Assistant Professor of Physics and Astronomy; B.S., M.S., University of Missouri, Columbia; Ph.D., University of Illinois, Urbana-Champaign
- Shunk, Dan L.** (1984), Professor of Industrial Engineering; B.S.I.E., M.S.I.E., Ph.D., Purdue University
- Si, Jennie** (1991), Professor of Electrical Engineering; B.S., M.S., Tsinghua University (China); Ph.D., University of Notre Dame
- Siegel-Valdes, Rebeca** (2002), Assistant Professor of Spanish; B.A., Manuel del Castillo Negrete National School of Conservation, Restoration and Museum Studies (Mexico); M.A., Ph.D., University of Texas, Austin
- Sieradzki, Karl** (1994), Professor of Chemical and Materials Science Engineering and Mechanical and Aerospace Engineering; B.S., Utica College of Syracuse University; M.S., Ph.D., Syracuse University
- Sierks, Michael R.** (2000), Associate Professor of Chemical Engineering; B.S., Stanford University; M.S., Colorado State University; Ph.D., Iowa State University
- Siferd, Sue Perrott** (1989), Associate Professor of Supply Chain Management; Director, Undergraduate Supply Chain Management Program; B.S., Denison University; M.B.A., Wright State University; M.A., Ph.D., Ohio State University
- Sigler, Mary** (2003), Associate Professor of Law; B.A., M.A., Arizona State University; J.D., University of Pennsylvania
- Silcock, B. William** (2001), Assistant Professor of Journalism and Mass Communication; B.A., M.A., Brigham Young University; Ph.D., University of Missouri
- Silver, Benjamin** (1971), Professor Emeritus of Journalism and Mass Communication; B.A., M.A., University of Iowa
- Simhony, Avital** (1994), Associate Professor of Political Science; B.A., M.A., University of Haifa (Israel); D.Phil., University of Oxford (United Kingdom)
- Simmons, Douglas J.** (1963), Professor Emeritus of French; A.B., Wabash College; M.A.T., Harvard University; Certificat de français usuel, degré supérieur, Certificat de prononciation française, Sorbonne University (France)
- Simmons, Howard** (1996), Professor Emeritus of Educational Leadership and Policy Studies; B.S., Spring Hill College; M.A.T., Indiana University; Ph.D., Florida State University
- Simon, Arleyn W.** (1989), Associate Research Professor of Anthropology; B.A., Montana State University; M.A., Oregon State University; Ph.D., Arizona State University
- Simon, Sheldon** (1975), Professor of Political Science; B.A., University of Minnesota, Twin Cities; M.A., Princeton University; Ph.D., University of Minnesota, Twin Cities
- Simonson, Mark** (1998), Clinical Assistant Professor of Finance; B.S., University of Northern Colorado; M.S., Ph.D., University of Oregon
- Simpson, Brooks** (1990), Professor of History; B.A., University of Virginia; M.A., Ph.D., University of Wisconsin, Madison
- Sinclair, Mark R.** (1985), Adjunct Professor of Geography; B.Sc., Otago University (New Zealand); Ph.D., U.S. Naval Postgraduate School, Monterey
- Sinex, Donal** (1995), Professor of Speech and Hearing Science; Director, Executive Committee, Speech and Hearing Science; B.S., Purdue University; Ph.D., Washington University, St. Louis
- Singh, Amarjit** (2002), Associate Research Professor of Bioengineering; B.Sc., Ranchi University (India); M.Sc., Ph.D., University of Bombay (India)
- Singhal, Avi C.** (1977), Professor of Civil and Environmental Engineering; B.Sc.Math., Agra University (India); B.Sc.Engn., B.Sc.Hons., St. Andrews University (United Kingdom); S.M., C.E., Sc.D., Massachusetts Institute of Technology
- Sinha, Rajiv K.** (1989), Associate Professor of Marketing; B.A., M.A., Delhi University (India); Ph.D., Pennsylvania State University

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Sipka, Danko (2002). Research Associate Professor of Russian and Slavic Languages; B.A., University of Sarajevo (Bosnia); M.A., Ph.D., University of Belgrade (Serbia); Ph.D., Polish Academy of Sciences (Poland)

Siriprakob, Prakorn (2000). Lecturer of Languages and Literatures; B.A., Chulalongkorn University (Thailand); M.P.A., Arizona State University

Sirkis, Murray D. (1968). Professor Emeritus of Electrical Engineering; B.S., Massachusetts Institute of Technology; M.S., Ph.D., University of Illinois

Skiba, Christopher J. (1987). Senior Research Professional of Geological Sciences; B.S., Arizona State University

Skibo, Edward B. (1982). Professor of Chemistry and Biochemistry; B.S., M.S., Drexel University; Ph.D., University of California, San Francisco

Skindlov, Jonathan A. (1993). Adjunct Professor of Geography; B.A., St. Olaf College; M.A., Ohio University; Ph.D., University of Delaware

Skoldberg, Phyllis (1977). Professor Emerita of Music; B.M., M.M., New England Conservatory of Music; M.M.E., D.M., Indiana University, Bloomington

Skromme, Brian J. (1989). Associate Professor of Electrical Engineering; B.S., University of Wisconsin, Madison; M.S., Ph.D., University of Illinois

Smeltzer, Larry R. (1986). Professor of Supply Chain Management; B.S., University of Montana; M.A., University of Nebraska; Ed.D., Northern Illinois University

Smith, Andrew T. (1978). Professor of Life Sciences; A.B., University of California, Berkeley; Ph.D., University of California, Los Angeles

Smith, Arthur B. Jr. (1967). Professor Emeritus of General Business; B.S., Hardin-Simmons University; M.B.A., Ed.D., University of Houston

Smith, Beth (2000). Associate Law Librarian; Assistant Director, Ross-Blakley Law Library; B.A., Centenary College; M.L.S., J.D., University of Washington

Smith, Cheryl Aubin (1996). Faculty Associate of Nursing; B.S.N., University of Arizona; M.S., Arizona State University



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Regents' Professor of Physics and Astronomy and Solid State Science; Director, Center for Solid State Science; B.Sc., Ph.D., D.Sc., University of Melbourne (Australia)

Smith, Hal L. (1979). Professor of Mathematics and Statistics; B.A., Ph.D., University of Iowa

Smith, Harvey A. (1977). Professor Emeritus of Mathematics and Statistics; B.S., Lehigh University; M.S., A.M., Ph.D., University of Pennsylvania

Smith, Henry Charles (1989). Professor Emeritus of Music; B.A., University of Pennsylvania; Artist Diploma, Curtis Institute of Music

Smith, Jeffrey B. (1990). Associate Professor of Music; M.M., University of Illinois; D.M.A., University of North Texas

Smith, Karen Ann (1999). Associate Professor of Curriculum and Instruction; B.A., University of the Americas (Mexico); M.A., Ph.D., Arizona State University

Smith, L. Christian (1971). Associate Professor of History; B.A., Union College; M.A., Ph.D., University of Illinois

Smith, Lehi T. (1959). Professor Emeritus of Mathematics and Statistics; B.S., M.A., Arizona State University; Ed.D., Stanford University

Smith, Marion W. (1952). Professor Emerita of Music; B.S., Capital University; M.M., American Conservatory of Music



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Regents' Professor of Educational Leadership and Policy Studies and Psychology in Education; B.A., M.P.S., Ph.D., University of Colorado

Smith, Ralph E. (1970). Professor Emeritus of Accountancy; B.B.A., Washburn University of Topeka; M.S., Ph.D., University of Kansas; C.P.A., Kansas

Smith, Richard L. (1967). Professor Emeritus of Industrial Engineering; B.S., Washington University; M.S., Ohio State University; Ph.D., Arizona State University

Smith, Ronald D. (1962). Professor Emeritus of History; A.B., San Diego State College; Ph.D., University of Southern California

Smith, Stanley E. (1977). Professor Emeritus of Journalism and Mass Communication; B.A., Colgate University; M.A., Purdue University

Smith, Thomas H. (2003). Associate Research Professor, Cancer Research Institute; B.S., Niagara University; Ph.D., Arizona State University

Smith-Daniels, Dwight E. (1987). Associate Professor of Supply Chain Management; B.B.A., University of Michigan; Ph.D., University of Arizona

Smith-Daniels, Vicki L. (1987). Professor of Supply Chain Management; B.B.A., University of San Diego; Ph.D., Ohio State University

Sneed, Jimmie R. (1988). Faculty Associate of Construction; B.S., Arizona State University

Snow, Robert (1970). Professor Emeritus of Sociology; B.S., M.A., Ph.D., University of Minnesota, Twin Cities

Snyder, Ernest E. Jr. (1958). Professor Emeritus of Physics and Astronomy/Science Education; A.B., M.A., Colorado State University; Ed.D., New York University

Snyder, Lester M. Jr. (1967). Professor Emeritus of Counseling Psychology; B.S., Millersville State College; M.Ed., Western Maryland College; Ph.D., University of Michigan

Soergel, Philip M. (1989). Associate Professor of History; B.A., Muskingum College; A.M., Ph.D., University of Michigan

Sola, Anthony (1995). Faculty Associate of Design; B.A., Ottawa University; M.B.A., University of Phoenix

Solis, Theodore (1989). Professor of Music; B.A., Arizona State University; M.A., University of Hawaii, Manoa; Ph.D., University of Illinois

Somerville, Susan C. (1977). Professor of Psychology; B.A., University of New England (Australia); Ph.D., Australian National University (Australia)

Sommerfeld, Milton R. (1968). Professor of Life Sciences; Associate Dean, College of Liberal Arts and Sciences; B.S., Southwest Texas State College; Ph.D., Washington University

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Song, Yuwu (1999), Assistant Librarian; B.A., Luo Yang Foreign Languages University, China; M.A., Clemson University; M.L.I.S., University of Texas, Austin

Sonmez, Sevil F. (1995), Associate Professor of Recreation Management and Tourism; B.B.A., Bernard M. Baruch College; M.P.R.T.M., Clemson University; Ph.D., Pennsylvania State University

Soroka, Susan C. (2003), Lecturer of Curriculum and Instruction; B.S., University of South Alabama; M.A., Arizona State University

Sousa, Karen H. (1998), Associate Professor of Nursing; Associate Dean for Graduate Programs and Research, College of Nursing; B.S., M.S., Ph.D., University of California, San Francisco

Spanias, Andreas S. (1988), Professor of Electrical Engineering; B.S.E.E., M.S.E.E., Ph.D., West Virginia University

Spanias, Photini (1998), Lecturer of Curriculum and Instruction; B.A., M.Ed., Ed.D., Arizona State University

Speer, Therese (1997), Faculty Associate of Nursing; B.S.N., Salve Regina University; M.S., University of Arizona

Spellman, Catherine (1995), Associate Professor of Architecture; B.A., B.Arch., Rice University; M.Arch., University of California, Los Angeles



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Spielberg, John (1990), Associate Professor of Mathematics and Statistics; B.S., Stanford University; Ph.D., University of California, Berkeley

Spielmann, Katherine A. (1987), Professor of Anthropology; A.B., Harvard University; M.A., Ph.D., University of Michigan

Spiers, James V. (1990), Senior Lecturer of Marketing; B.S., Weber State College; M.A., University of Northern Colorado

Spindler, Robert P. (1988), Archivist; Head, Department of Archives and Manuscripts; B.A., M.A., Boston University; M.S., Simmons College

Spinosa, Frank (1965), Professor Emeritus of Music; B.M., M.A., Boston University; D.M.A., University of Illinois

Spinrad, Tracy (2000), Assistant Professor of Family and Human Development; B.A., University of California, Irvine; M.S., Ph.D., Pennsylvania State University

Spring, Robert S. (1988), Professor of Music; B.M., M.M., D.M.A., University of Michigan

Spritzer, Ralph S. (1986), Visiting Professor of Law; B.S., LL.B., Columbia University

Squires, Kyle D. (1997), Professor of Mechanical and Aerospace Engineering; B.S., Washington State University; M.S., Ph.D., Stanford University

Squires, Rose L. (1981), Professor Emerita of Nursing; B.S., Duquesne University; M.A., Ed.D., Columbia University

St. Louis, Robert D. (1982), Professor of Computer Information Systems; Chair, Department of Information Systems; A.B., Rockhurst College; M.S., Ph.D., Purdue University

Staab, Wayne J. (2001), Adjunct Professor of Speech and Hearing Science; B.A., Fort Hays State University; M.S., University of Wisconsin; Ph.D., Michigan State University

Stafford, Kenneth R. (1957), Professor Emeritus of Education; B.A., M.Ed., Ph.D., University of Oklahoma

Stafford, Mary E. (1994), Associate Professor of Educational Psychology; Training Director, School Psychology; B.A., University of Texas, Austin; M.Ed., University of Houston, Victoria; Ph.D., University of Texas, Austin

Stage, Christina W. (1992), Senior Lecturer of Interdisciplinary Studies; 401 Coordinator, Bachelor of Interdisciplinary Studies; B.J., University of Nebraska, Lincoln; M.A., Ohio University; Ph.D., Arizona State University

Stahl, Robert (1978), Professor of Curriculum and Instruction; B.A., M.A., Ed.D., University of Florida

Stahlman, Rebecca (2003), Lecturer of Curriculum and Instruction; M.Ed., Arizona State University

Stalzer, Frank S. (1955), Professor Emeritus of Music; B.M.Ed., University of Kansas; M.M., Eastman School of Music

Stamm, Jill (1998), Clinical Assistant Professor of Psychology in Education; B.A., DePauw University; M.A., Ph.D., Arizona State University

Stancliff, Michael G. (2001), Lecturer of English; B.A., Albion College; M.A., Ph.D., State University of New York, Buffalo

Stanford, Michael (1992), Senior Lecturer of the Barrett Honors College; B.A., Duke University; M.A., Ph.D., University of Virginia

Stange, Jean B. (1970), Professor Emerita of Family and Human Development; B.S., Iowa State University; M.S., University of Minnesota, Twin Cities

Stanley, James T. (1968), Professor Emeritus of Materials Science and Engineering; B.S., M.S., Ph.D., University of Illinois

Stanton, Ann M. (1980), Professor of Law; B.A., University of Minnesota, Twin Cities; Ph.D., J.D., Stanford University

Stanton, Dan (2000), Assistant Librarian, Government Documents/Maps Collection; B.A., Trinity College; M.L.S., University of Arizona

Stark, Barbara L. (1972), Professor of Anthropology; B.A., Rice University; M.Phil., Ph.D., Yale University



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Regents' Professor of Physics and Astronomy;
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Stauffer, Sandra L. (1990), Professor of Music; B.S., West Chester University; M.M., Ph.D., University of Michigan

Steadman, Lyle B. (1971), Assistant Professor of Anthropology; B.A., Occidental College; M.A., University of California, Los Angeles; Ph.D., Australian National University (Australia)



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Regents' Professor Emerita of Physics and Astronomy; B.S., University of Minnesota, Twin Cities; Ph.D., Cornell University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Steenerson, Craig A. (2001), Assistant Professor of Theatre; B.A., California State University, San Bernadino; M.F.A., Utah State University

Steele, Caryl J. (1960), Professor Emerita of Education; B.A., Albion College; M.A., Arizona State University

Steffl, Bernita M. (1961), Professor Emerita of Nursing; B.S.N., M.P.H., University of Minnesota, Twin Cities

Steimle, Timothy C. (1985), Professor of Chemistry and Biochemistry; B.S., Michigan State University; Ph.D., University of California, Santa Barbara

Steinbart, Paul (1997), Professor of Computer Information Systems; B.A., University of Illinois; M.B.A., Southern Illinois University; Ph.D., Michigan State University

Steiner, Sue (1996), Associate Professor of Social Work; B.A., Brandeis University; M.S.W., San Francisco State University; Ph.D., University of Washington

Stelmach, George E. (1990), Professor of Kinesiology; B.S., University of Illinois; M.A., Ed.D., University of California, Berkeley

Stephens, Nancy J. (1979), Associate Professor of Marketing; Director, Night M.B.A. Program; B.S., M.S., University of Illinois; Ph.D., University of Texas, Austin

Stephenson, Christine F. (1995), Adjunct Professor of Life Sciences; B.S., University of Ulster (United Kingdom); Ph.D., The Queen's University of Belfast (United Kingdom)

Sterling, Pamela (1999), Assistant Professor of Theatre; B.F.A., M.F.A., University of Washington

Steverson, Norris J. (1932), Professor Emeritus of Kinesiology; B.A., Arizona State University; M.S., University of Southern California

Stewart, Donald G. (1964), Professor Emeritus of Mathematics and Statistics; B.A., M.S., Utah State University; Ph.D., University of Tennessee, Knoxville

Stiftel, Ruthy Z. (1997), Lecturer of Hebrew; B.A., Hebrew University of Jerusalem (Israel); M.A., Ohio State University

Stillwell, Susan B. (1997), Clinical Associate Professor of Nursing; B.S., College of Saint Teresa; M.S.N., University of Florida

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Wall, Gerard (1992), Adjunct Professor of Life Sciences; B.S., State University of New York, Stony Brook; M.S., Ph.D., Kansas State University

Wallace, Charles E. (1958), Professor Emeritus of Mechanical and Aerospace Engineering; B.S., Lewis and Clark College; M.S., Oregon State University; Ph.D., Stanford University

Wallen, Carl (1973), Professor Emeritus of Curriculum and Instruction; B.A., University of California, Santa Barbara; M.A., San Francisco State College; Ed.D., Stanford University

Waller, Margaret Ann (1997), Associate Professor of Social Work; B.M., DePaul University; M.S.W., University of Illinois; Ph.D., University of Chicago

Walmsley, Amanda (2001), Assistant Research Professor of Life Sciences; B.S., Ph.D., University of Queensland (Australia)

Walsberg, Glenn E. (1978), Professor of Life Sciences; B.S., California State University, Long Beach; Ph.D., University of California, Los Angeles

Walt, Henry J. (2002), Adjunct Professor of Anthropology; B.A., University of California, Santa Barbara; M.A., Ph.D., University of New Mexico

Walters, Sheila A. (1971), Librarian Emerita; B.A., University of Oklahoma; M.L.S., Louisiana State University

Walton-Ramirez, Anne (1999), Lecturer of Spanish; B.A., University of South Alabama; M.A., Arizona State University

Wamacks, Naomi W. (1968), Professor Emerita of Curriculum and Instruction; B.A., M.A., Ed.D., Arizona State University

Wang, Alan P. (1970), Professor Emeritus of Mathematics and Statistics; B.A., Washington State University; M.A., Ph.D., University of California, Los Angeles

Wang, Cecilia (1971), Professor Emerita of Mathematics and Statistics; B.A., Immaculate Heart College; M.A., Ph.D., University of California, Los Angeles

Wang, Edward Y. (1979), Professor Emeritus of Electrical Engineering; B.S., Morningside College; M.S., Purdue University; Ph.D., Tufts University

Ward, James C. (1986), Yellow Corporation Professor of Marketing; B.A., M.B.A., Ph.D., University of Minnesota, Twin Cities

Ward, Lance (1997), Lecturer of Mathematics and Statistics; B.S., M.S., Brigham Young University

Wardwell, Sandra W. (1974), Research Specialist Emerita of Geography; B.S., University of Michigan

Wargo, Rebecca (2003), Assistant Librarian, University Libraries, Archives and Manuscripts; B.A., Pennsylvania State University; M.L.I.S., University of Pittsburgh

Warne, Donald K. (2003), Clinical Professor of Health Administration and Policy; B.S., Arizona State University; M.P.H., Harvard; M.D., Stanford University

Warner, Carolyn (1994), Associate Professor of Political Science; B.A., University of California, San Diego; M.A., Ph.D., Harvard University

Warnicke, Retha M. (1972), Professor of History; A.B., Indiana University; M.A., Ph.D., Harvard University

Warren-Findley, Jannelle (1992), Associate Professor of History; B.A., Texas Woman's University; M.Phil., Ph.D., George Washington University

Watson, Clyde W. (1971), Professor Emeritus of Art; B.F.A., Bethany College; M.A., Kansas State University

Watson, George L. (1969), Professor of Journalism and Mass Communication; B.A., Phillips University; M.A., Ph.D., Duke University

Webb, L. Dean (1978), Professor of Educational Leadership and Policy Studies; Academic Program Coordinator, M.Ed. and Ph.D. in Educational Administration and Supervision; B.A., M.A.T., Ph.D., University of Florida

Webb Peterson, Patricia R. (1998), Assistant Professor of English; B.A., M.A., Illinois State University, Normal; Ph.D., University of Illinois, Urbana-Champaign

Webber, Andrew N. (1989), Professor of Life Sciences; Associate Director, School of Life Sciences Graduate Program; Director, Center for the Study of Early Events in Photosynthesis; B.Sc., Ph.D., University of Essex (United Kingdom)

Weber, Sandra L. (1985), Associate Professor of Construction; B.S.C.E., M.S.C.E., University of California, Berkeley; Ph.D., Arizona State University

Weed, Andrew (1999), Assistant Professor of Design; B.F.A., Arizona State University; M.F.A., Basel School of Design (Switzerland)

Weidemaier, William (1977), Professor Emeritus of the Barrett Honors College; B.A., Northern Arizona University; M.A., Ph.D., Arizona State University

Weierstall, Uwe (1994), Assistant Research Scientist of Physics and Astronomy; B.S., University of Tübingen (Germany); M.S., Ph.D., Institute of Applied Physics in Tübingen (Germany)

Weigend, Guido G. (1976), Professor Emeritus of Geography; Dean Emeritus, College of Liberal Arts and Sciences; B.S., M.S., Ph.D., University of Chicago

Weiner, Gordon M. (1968), Professor Emeritus of History; A.B., Ph.D., University of Pennsylvania

Weinstein, James (1986), Professor of Law; Amelia D. Lewis Professor of Constitutional Law; B.A., J.D., University of Pennsylvania

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS



Weiser, Kurt
(1989)

Regents' Professor of Art; B.F.A., Kansas City Art Institute; M.F.A., University of Michigan

Weiss, Karl H. (1984). Senior Research Professional, Center for Solid State Science; B.Sc., Ursinus College; M.Sc., University of Arizona

Weiss, Jane (2000). Assistant Professor of Accountancy; B.B.A., University of Wisconsin, Whitewater; M.Acc., University of Georgia; Ph.D., University of Wisconsin

Weiss, Neil A. (1970). Professor Emeritus of Mathematics and Statistics; B.A., M.A., Ph.D., University of California, Los Angeles

Weitz, Rose (1978). Professor of Sociology; B.A., City University of New York; M.A., Ph.D., Yale University

Weitzman, Irene (1998). Adjunct Professor of Life Sciences; B.S., Brooklyn College; M.A., Ph.D., Columbia University

Welch, H. William (1967). Professor Emeritus of Electrical Engineering; B.A., DePauw University; M.S., Ph.D., University of Michigan; P.E.

Welfert, Bruno (1990). Associate Professor of Mathematics and Statistics; M.A., University of Paris VI (France); Ph.D., University of California, San Diego

Wellner, Karen (2003). Lecturer of Curriculum and Instruction; B.S., State University of New York, Oneonta; M.A., Ph.D., University of Iowa

Wells, Barrie E. (1981). Professor Emeritus of Music; B.M., M.M., University of the Pacific; D.M.A., University of Oregon

Wells, Christine L. (1976). Professor Emerita of Kinesiology; B.S., University of Michigan; M.S., Smith College; Ph.D., Pennsylvania State University

Wells, David (1998). Senior Lecturer of Interdisciplinary Studies; B.A., Bucknell University; Ph.D., University of Southern California

Wells, Valana L. (1987). Associate Professor of Aerospace Engineering; Vice Chair, Undergraduate Programs in Mechanical and Aerospace Engineering; A.B., M.S., Ph.D., Stanford University

Welsh, Peter H. (1986). Associate Professor of Anthropology; B.A., Northern Arizona University; M.A., Ph.D., University of Pennsylvania

Wentz, Elizabeth A. (1997). Assistant Professor of Geography; B.A., M.A., Ohio State University; Ph.D., Pennsylvania State University

Wentz, Richard E. (1972). Professor Emeritus of Religious Studies; A.B., Ursinus College; B.D., Lancaster Theological Seminary; M.Phil., Ph.D., George Washington University

Wesbury, Stuart A. Jr. (1994). Professor Emeritus of Health Administration and Policy; B.S., Temple University; M.H.A., University of Michigan; Ph.D., University of Florida

Weschler, Louis (1980). Professor Emeritus of Public Affairs; B.A., California State University, Long Beach; M.A., Ph.D., University of California, Los Angeles

West, Stephen G. (1981). Professor of Psychology; B.A., Cornell University; M.A., Ph.D., University of Texas

Westerhoff, Paul (1995). Associate Professor of Civil and Environmental Engineering; B.S., Lehigh University; M.S., University of Massachusetts, Amhurst; Ph.D., University of Colorado, Boulder

Westie, Frank R. (1983). Adjunct Professor of Sociology; B.S., Central Michigan University; Ph.D., Ohio State University

Wetsel, W. David (1989). Professor of French; B.A., University of Texas, Austin; M.A., University of Chicago; M.A., Ph.D., Brandeis University

Wexler, Kathryn (1992). Clinical Assistant Professor of Speech and Hearing Science; B.A., University of Michigan; M.S., Tulane University

Wheatley, John C. (1983). Senior Research Professional of Physics and Astronomy; B.S., Arizona State University

Wheeler, Jacqueline (1994). Senior Lecturer of English; B.S., M.A., Northern Arizona University; Ph.D., Arizona State University

Wheeler, Michael D. (1975). Senior Research Professional of Chemistry and Biochemistry; B.S., University of Wisconsin, Madison

Whitaker, Matthew (2001). Assistant Professor of History; B.A., M.A., Arizona State University; Ph.D., Michigan State University

Whitam, Frederick L. (1966). Professor Emeritus of Sociology; B.A., Millsaps College; A.M., Ph.D., Indiana University, Bloomington

White, Barbara G. (1990). Clinical Associate Professor of Nursing; B.S., M.S., Virginia Commonwealth University

White, Dave D. (2001). Assistant Professor of Recreation Management and Tourism; B.A., George Mason University; M.A., University of Idaho; Ph.D., Virginia Polytechnic Institute and State University

White, Harold C. (1966). Professor Emeritus of Management; B.S., M.S., University of Oregon; Ph.D., University of Florida

White, James J. (1991). Senior Lecturer of Chemistry and Biochemistry; B.A., Idaho State University; M.S., Ph.D., University of Arizona

White, James R. (1981). Professor of Art; B.F.A., M.F.A., Ohio University

White, Joann (1997). Faculty Associate of Design; B.S., Northwestern University

White, Michael J. (1974). Professor of Philosophy; B.A., Arizona State University; M.A., Ph.D., University of California, San Diego

White, Patricia D. (1999). Professor of Law; Dean, College of Law; B.A., M.A., J.D., University of Michigan

Whitcotton, Stacey (1997). Associate Professor of Accountancy; B.A., Texas Tech University; Master of Accountancy, Ph.D., University of Oklahoma

Whitehurst, Harry B. (1958). Professor Emeritus of Chemistry and Biochemistry; B.A., M.A., Ph.D., Rice University

Whitley, David S. (2003). Adjunct Professor of Geography; A.B., M.A., Ph.D., University of California, Los Angeles

Wie, Bong (1989). Professor of Engineering; B.S., Seoul National University (South Korea); M.S., Ph.D., Stanford University

Wiesel, Avi (1995). Associate Professor of Construction; B.Sc.C.E., Polytechnic Institute of Timisoara (Romania); M.Sc.C.E., Ph.D., Technion-Israel Institute of Technology (Israel)

Wigal, Kathy D. (2000). Lecturer of Accountancy; B.S., Arizona State University; M.B.A., M.Ed., Ed.D., Northern Arizona University

Wiggins, Harry B. (1987). Senior Lecturer Emeritus of Supply Chain Management; B.S., U.S. Merchant Marine Academy; B.S., University of Vermont; M.B.A., Harvard University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- Wilcox, M. Jeanne** (1990), Professor of Speech and Hearing Science; B.A., Kansas State; M.A., Ph.D., Memphis State University
- Wiley, Terrence G.** (2000), Professor of Educational Leadership and Policy Studies; Director, Division of Educational Leadership and Policy Studies; B.A., M.A., California State University, Long Beach; Ph.D., University of Southern California
- Wilkens, Barry J.** (1992), Senior Research Professional, Center for Solid State Science; B.A., Columbia Union College; M.Sc., Rutgers, The State University of New Jersey
- Wilkinson, Christine K.** (1970), Associate Professor of Educational Leadership and Policy Studies; Senior Vice President and Secretary of the University; B.A., Arizona State University; M.A., University of California, Berkeley; Ph.D., Arizona State University
- Wilkinson, Joseph W.** (1964), Professor Emeritus of Accountancy; B.S., Carnegie Institute of Technology; M.B.A., Stanford University; D.B.A., University of Oregon
- Williams, Carol E.** (1984), Academic Associate, Division of Undergraduate Academic Services; Assistant Director, Academic Success Programs; B.A., Trinity University, San Antonio; M.A., Arizona State University
- Williams, David P. III** (1978), Instructor of Sociology; B.A., B.S., M.A., University of Pennsylvania; Ph.D., Arizona State University
- Williams, Douglas** (2000), Lecturer of Mathematics and Statistics; B.S., University College of Belize; M.S., Arizona State University
- Williams, Frank G.** (1975), Professor Emeritus of Health Administration and Policy; B.S., M.A., Oregon State University; M.A., Ph.D., University of Iowa
- Williams, Jenny L.** (1967), Librarian Emerita; B.A., M.L.S., Indiana University
- Williams, Peter** (1981), Professor of Chemistry and Biochemistry; B.S., Ph.D., University of London (United Kingdom)
- Williams, Philip F.C.** (1986), Professor of Chinese; B.A., University of Arkansas; M.A., Ph.D., University of California, Los Angeles
- Williams, Robert C.** (1978), Professor of Anthropology; B.A., M.A., University of Cambridge (United Kingdom); B.A., M.A., Ph.D., University of Michigan
- Williams, Stanley N.** (1991), Professor of Geological Sciences; B.S., Beloit College; M.A., Ph.D., Dartmouth College
- Williamson, Madeline J.** (1976), Professor of Music; B.A., Ohio Wesleyan University; M.M., Western Michigan University; Ph.D., Arizona State University
- Willis, Wayne T.** (1989), Associate Professor of Kinesiology; A.B., University of California, Berkeley; M.A., San Francisco State University; Ph.D., University of California, Berkeley
- Wills, J. Robert** (1994), Professor of Theatre; Dean, Herberger College of Fine Arts; B.A., College of Wooster; M.A., University of Illinois; Ph.D., Case Western Reserve University
- Wilson, Angela Cavender** (2000), Assistant Professor of History; B.A., University of Minnesota, Minneapolis; M.A., Ph.D., Cornell University
- Wilson, Gail Eugene** (1972), Associate Professor of Music; B.S., Ohio State University; M.M., Arizona State University
- Wilson, Gloria N.** (1961), Professor Emerita of Educational Media and Computers; B.A., Montclair State College; M.A., Ed.D., Columbia University
- Wilson, Jeffrey R.** (1985), Associate Professor of Statistics; Director, School of Health Administration and Policy; B.A., University of the West Indies (Trinidad and Tobago); M.S., Ph.D., Iowa State University
- Wilson, Lorna A.** (1968), Professor Emerita of French; B.Ed., University of Saskatchewan (Canada); M.A., Arizona State University
- Wilson-Rawls, N. Jeanne** (1997), Assistant Professor of Life Sciences; B.S., McMaster University (Canada); Ph.D., Saint Louis University
- Wilt, Glenn A. Jr.** (1963), Professor Emeritus of Finance; A.B., Occidental College; M.B.A., Miami University; Ph.D., University of Michigan; C.F.A.
- Windhorst, Rogier A.** (1987), Professor of Physics and Astronomy; B.Sc., M.Sc., Ph.D., University of Leiden (Netherlands)
- Winer, Laurence H.** (1983), Professor of Law; B.A., M.A., Ph.D., Boston University; J.D., Yale University
- Winkelman, Michael** (1988), Senior Lecturer of Anthropology; B.A., Rice University; Ph.D., University of California, Irvine
- Winkelman, Richard D.** (1965), Professor Emeritus of Economics; B.A., Southern Illinois University; M.A., Ph.D., University of Illinois
- Wintergalen, Barbara A.** (1992), Professor Emerita of Nursing; B.S.N., Loretto Heights College; M.S., Arizona State University
- Wirtz, Dorothy** (1959), Professor Emerita of French; B.A., University of Iowa; M.A., Ph.D., University of Wisconsin
- Wiseman, Douglas E.** (1976), Professor Emeritus of Curriculum and Instruction; B.S., M.A., Eastern Michigan University; Ph.D., University of Illinois
- Witczak, Matthew W.** (1999), Professor of Civil and Environmental Engineering; B.S.C.E., M.S.C.E., Ph.D., Purdue University
- Witt, Tom** (1975), Associate Professor of Design; B.A., M.A., M.F.A., University of California, Los Angeles
- Wixted, J. Timothy** (1978), Professor Emeritus of Asian Languages; B.A., University of Toronto (Canada); A.M., Stanford University; D.Phil., University of Oxford (United Kingdom)
- Wodrich, David L.** (2002), Associate Professor of Psychology in Education; B.S., M.A., Northern Arizona University; Ph.D., Arizona State University
- Wojciechowski, Martin F.** (2001), Assistant Professor of Life Sciences; B.S., Northern Michigan University; Ph.D., University of Northern Colorado
- Wolchik, Sharlene** (1980), Professor of Psychology; B.A., Vassar College; M.S., Ph.D., Rutgers, The State University of New Jersey
- Wolf, Donald J.** (1969), Professor Emeritus of Political Science; B.A., M.A., Gonzaga University; S.T.M., University of Santa Clara; Ph.D., Georgetown University
- Wolf, George H.** (1986), Associate Professor of Chemistry and Biochemistry; B.A., University of California, San Diego; M.S., Ph.D., University of California, Berkeley
- Wolf, Robert** (1985), Professor Emeritus of Design; B.S., Southern Illinois University, Carbondale; M.A., University of Missouri; Certificate, Konstindustriskolan (Sweden)
- Wolf, W. Shapard Jr.** (1983), Associate Research Administrator, Sociology; Director, Survey Research Laboratory, Sociology; B.F.A., Florida State University; M.Ed., University of Georgia
- Wolfe, Philip M.** (1988), Professor of Industrial Engineering; B.S., University of Missouri; M.S.E., Ph.D., Arizona State University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Wolfthal, Diane (1995), Associate Professor of Art; B.A., M.A., City University of New York; Ph.D., Institute of Fine Arts, New York University

Wollam, Owen A. (1964), Professor Emeritus of French; B.A., M.A., Montana State University; Ph.D., University of Washington

Wong, Elizabeth (1996), Lecturer of Japanese; B.A., William Smith College; M.A., Washington University, St. Louis; Ph.D., Stanford University

Wong, Timothy C. (1995), Professor of Chinese; Director, Center for Asian Studies; B.A., Saint Mary's College; M.A., University of Hawaii; Ph.D., Stanford University

Wood, Byard D. (1970), Professor Emeritus of Mechanical and Aerospace Engineering; B.S.M.E., M.S.M.E., Utah State University; Ph.D., University of Minnesota, Twin Cities

Wood, Steven D. (1975), Professor Emeritus of Marketing; B.S., M.A., California State University, San Diego; Ph.D., University of Wisconsin, Madison

Woodbury, Neal W. (1987), Professor of Chemistry and Biochemistry; B.S., University of California, Davis; Ph.D., University of Washington

Woodfill, Marvin C. (1966), Professor Emeritus of Computer Science and Engineering; B.S., M.S., Ph.D., Iowa State University

Wooding, Robert R. (1971), Professor Emeritus of Construction; B.S., United States Naval Academy; B.C.E., M.C.E., Rensselaer Polytechnic Institute

Woodley, Ann E. (2000), Professor of Law; Director, Lodestar Mediation Clinic; B.A., University of Arizona; J.D., Arizona State University

Woodman, Natalie J. (1969), Professor Emerita of Social Work; B.A., New York University; M.S.S., Smith College

Woodson, Stephani E. (2000), Assistant Professor of Theatre; B.F.A., M.A., University of Texas, Austin; Ph.D., Arizona State University

Woodward, Mark R. (1985), Associate Professor of Religious Studies; B.A., M.A., Ph.D., University of Illinois

Woolf, Charles M. (1961–63; 1964), Professor Emeritus of Life Sciences; Dean Emeritus, College of Liberal Arts and Sciences and Graduate College; B.S., M.S., University of Utah; Ph.D., University of California, Berkeley

Wooten, William W. (1959), Professor Emeritus of History; B.A., University of Chicago; M.A., University of Iowa; Ph.D., University of Minnesota, Twin Cities

Wootton, Richard T. (1964), Professor Emeritus of Education; B.S., M.S., Ed.D., University of Utah

Wosinski, Marek (1995), Senior Lecturer of Psychology; B.A., M.A., Ph.D., University of Warsaw (Poland)

Wotring, Roxena A. (1994), Clinical Assistant Professor of Nursing; B.S.N., M.S., Arizona State University

Wright, David (1981), Associate Research Professional, Center for Solid State Science; B.S., Arizona State University

Wright, Johnson Kent (1994), Associate Professor of History; Director, Graduate Studies; B.A., Kalamazoo College; M.A., Ph.D., University of Chicago

Wright, M. Lin (1973), Professor Emerita of Theatre; B.A., M.A., Ph.D., University of Minnesota, Twin Cities

Wu, Ai-Hwa (1964), Librarian Emerita; B.A., National Taiwan University (Taiwan); M.L.S., University of Washington

Wu, Jianguo (1995), Associate Professor of Life Sciences; B.S., University of Inner Mongolia (China); M.S., Ph.D., Miami University

Wu, Teresa (2001), Assistant Professor of Industrial Engineering; B.S., M.S., Beijing University of Aeronautics and Astronautics (China); Ph.D., University of Iowa

Wulk, Ned W. (1957), Professor Emeritus Kinesiology; B.S., Wisconsin State University; M.Ed., Xavier University

Wurzburger, Marilyn J. (1960), Librarian; Department of Archives and Manuscripts; B.A., MacMurray College

Wurzell, Carol A. (1965), Professor Emerita of Nursing; B.S., California State College, Chico; M.S., University of Maryland, College Park

Wyckoff, Susan (1979), Professor Emerita of Physics and Astronomy; B.A., Mount Holyoke College; Ph.D., Case Western Reserve University

Wyndelts, Robert W. (1974), Professor Emeritus of Accountancy; B.B.A., M.P.A., Georgia State University; Ph.D., University of Georgia; C.P.A., Arizona, Georgia

Wytko, Joseph R. (1975), Professor of Music; B.M.E., West Virginia University; M.M., D.M., Northwestern University

X

Xu, Jun-Ping (1991), Associate Research Professor, Cancer Research Institute; B.S., Shanghai College of Traditional Chinese Medicine (China); Ph.D., Tokyo College of Pharmacy (Japan)

Xue, Guoliang (2001), Associate Professor of Computer Science and Engineering; B.S., M.S., Qufu Teachers University (China); Ph.D., University of Minnesota, Minneapolis

Y

Yabes, Ruth Ammerman (1990), Associate Professor of Planning and Landscape Architecture; B.S., B.A., University of California, Davis; M.C.P., University of Pennsylvania; Ph.D., Cornell University

Yabiku, Scott (2002), Assistant Professor of Sociology; B.A., University of Chicago; M.A., Pennsylvania State University; Ph.D., University of Michigan

Yamaguchi, Gary T. (1989), Research Professor of Bioengineering; A.B., Occidental College; B.S., California Institute of Technology; S.M.M.E., Massachusetts Institute of Technology; Ph.D., Stanford University

Yamamori, Tetsumao (1989), Adjunct Professor of Sociology; B.A., Northwest Christian College; B.D., Texas Christian University; Ph.D., Duke University

Yancy, Margaret Lee (1997), Faculty Associate of Nursing; B.S.N., M.S., Arizona State University

Yao, Lun-Shin (1981), Professor of Engineering; B.S.E., Cheng Kung University; M.S., University of Texas; Ph.D., University of California, Berkeley

Yao, Winberta M. (1975), Librarian Emerita; B.A., University of California, Berkeley; M.S., Columbia University

Yates, Ann M. (1978), Research Professional Emerita of Chemistry and Biochemistry; B.S., Saint Lawrence University; Ph.D., Arizona State University

Yau, Stephen S. (1994), Professor of Computer Science and Engineering; B.S., National Taiwan University (Taiwan); M.S., Ph.D., University of Illinois, Urbana-Champaign

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Ye, Nong (1998), Professor of Industrial Engineering; B.S., Peking University (China); M.S.E., Chinese Academy of Sciences (China); Ph.D., Purdue University

Yeater, James W. (1958), Professor Emeritus of Theatre; B.A., Baker University; M.A., University of Washington; Ph.D., University of Illinois

Yellow Bird, Michael J. (2000), Associate Professor of Social Work; B.S.W., University of North Dakota; M.S.W., University of Wisconsin, Milwaukee; Ph.D., University of Wisconsin, Madison

Yopez, Eleanor (1984), Academic Professional Emerita of Social Work; B.A., Michigan State University; M.A., Western Michigan University; M.S.W., University of Michigan

Yoshioka, Carlton F. (1988), Professor of Recreation Management and Tourism; Graduate Coordinator, Department of Recreation Management and Tourism; B.A., University of California, Santa Barbara; M.A., California State University, Chico; Ph.D., University of Oregon

Young, Bernard (1988), Professor of Art; B.F.A., Temple University; M.F.A., Ph.D., Cornell University

Young, David A. (2001), Professor of Life Sciences; Dean, College of Liberal Arts and Sciences; B.A., M.A., California State University, Fullerton; Ph.D., Claremont Graduate University

Young, Dennis L. (1975), Professor of Mathematics and Statistics; B.S., Saint Louis University; M.S., Ph.D., Purdue University

Young, Hewitt H. (1967), Professor Emeritus of Industrial Engineering; B.S.M.E., M.S.I.E., Case Institute of Technology; Ph.D., Arizona State University

Young, Joseph E. (1979), Professor Emeritus of Art; B.A., California State University, Los Angeles; M.A., University of California, Los Angeles

Young, Josephine Peyton (1998), Assistant Professor of Curriculum and Instruction; M.A., University of West Florida; Ph.D., University of Georgia

Young, Otis E. Jr. (1963), Professor Emeritus of History; A.B., A.M., Ph.D., Indiana University

Young, Sheila (2002), Assistant Librarian; Nobel Science Reference Services; B.Ed., University of Toledo; M.S., University of Arkansas; M.L.S., University of Oklahoma

Youngblood, Robert L. (1973), Professor of Political Science; B.A., Willamette University; M.A., University of Hawaii, Manoa; Ph.D., University of Michigan

Z

Zandieh, Michelle (1997), Assistant Professor of Mathematics and Statistics; B.A., Northwestern University; M.S., Ph.D., Oregon State University

Zaslow, Bertram (1956), Professor Emeritus of Chemistry and Biochemistry; B.A., Cornell University; M.S., University of Minnesota, Twin Cities; Ph.D., Iowa State University

Zatz, Marjorie S. (1982), Professor of Justice Studies; Associate Dean, Student Support Services, Graduate College; B.A., University of Massachusetts, Amherst; M.A., Ph.D., Indiana University, Bloomington

Zautra, Alex (1976), Professor of Psychology; Director, Clinical Program in Psychology; B.A., Antioch College; M.S., Ph.D., University of Utah

Zehnder, Joseph A. (2000), Professor of Geography; Director, Southwest Center for Environmental Research and Policy; B.S., M.S., University of Illinois, Chicago; Ph.D., University of Chicago

Zeitlin, Marilyn A. (1992), Director, ASU Art Museum; A.B., M.A., Harvard University

Zell, Ann (2000), Academic Associate of Electrical Engineering

Zhang, Junshan (2000), Assistant Professor of Electrical Engineering; B.E., Huazong University of Science and Technology (China); M.S., University of Georgia; Ph.D., Purdue University

Zhang, Xia (2002), Lecturer of Chinese; B.A., Sichuan University (China); M.A., University of Victoria (Canada); Ph.D., University of Alberta (Canada)

Zhang, Young-Hang (1997), Professor of Electrical Engineering; Nanjing Normal University (China); M.Sc., Institute of Semiconductors, Chinese Science and Technology University (China); Ph.D., University of Stuttgart (Germany)

Zhou, Lin (2001), Lincoln Professor of Ethics; B.S., Fudan University (China); Ph.D., Princeton University

Zhu, Anmin (1997), Senior Lecturer of Mathematics and Statistics; B.S., Anhui University (China); M.S., Milin University (China); Ph.D., Arizona State University

Zimiles, Herbert (1988), Professor Emeritus of Educational Psychology; B.A., New York University; Ph.D., University of Rochester

Zimmer, Carl R. (1959), Professor Emeritus of Engineering; B.S.E.E., Cornell University; M.S.E.E., Ph.D., Syracuse University

Zottola, Adelina (1997), Academic Associate, Division of Undergraduate Academic Services; Program Coordinator, Science and Math Service Learning; B.S., State University of New York, Binghamton

Zucker, Stanley H. (1975), Professor of Curriculum and Instruction; B.A., State University of New York, Stony Brook; M.S., Hofstra University; Ph.D., University of Missouri, Columbia

Zwiebel, Imre (1979), Professor Emeritus of Chemical Engineering; B.S., University of Michigan; M.S., Ph.D., Yale University

Zygas, K. Paul (1984), Associate Professor of Architecture; A.B., M.Arch., Harvard University; Ph.D., Cornell University

Administrative Personnel

Arizona Board of Regents

Governor of Arizona	Janet Napolitano
Superintendent of Public Instruction	Tom Horne
Student Regent (voting), appointed to June 2004	Danelle Kelling
Student Regent (nonvoting), appointed to June 2005	Wesley McCalley
Regent, appointed to January 2006	Chris Herstam
Regent, appointed to January 2006	Jack Jewett
Regent, appointed to January 2008	Christina Palacios
Regent, appointed to January 2008	Gary L. Stuart
Regent, appointed to January 2010	Fred T. Boice
Regent, appointed to January 2010	Robert B. Bulla
Regent, appointed to January 2012	Ernest Calderon
Regent, appointed to January 2012	Lorraine Frank
Executive Director	Linda J. Blessing
Counsel to the Board	Joel Sideman

President's Office

President	Michael M. Crow
Senior Vice President and Secretary of the University	Christine K. Wilkinson
Senior Vice President and University Planner	Richard Stanley
Senior Advisor to the President	James O'Brien
Director, Office of the President and Special Assistant to the President	Joyce Smitheran
Executive Director, Office of University Initiatives	Kimberly Loui
Director, Office of Pan-American Initiatives and Special Advisor to the President	Jorge De Los Santos
Director, Strategic Projects and Special Assistant to the President	Mariko Silver
Advisor to the President on American Indian Affairs	Peterson Zah
Vice President and General Counsel	Paul J. Ward
Executive Director of Athletics	Gene Smith
Director, Equal Opportunity/Affirmative Action	Barbara A. Mawhiney
ICA Faculty Representative	Michael Mokwa

ASU Main

Academic Affairs

Executive Vice President and Provost of the University	Milton D. Glick
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Vice Provost	Nancy A. Gutierrez
Vice Provost	Gail Hackett
Vice Provost	Ruth S. Jones
University Chief Information Officer and Vice Provost for Information Technology	William E. Lewis
Assistant Vice President for Academic Affairs	Louis Olivas
Assistant to the Executive Vice President and Provost of the University	Linda Van Scoy
Assistant to the Executive Vice President and Provost of the University	Lynn Carpenter
Special Assistant to the Executive Vice President and Provost for Web Development	Jake Kupiec
Director, Academic Articulation	Zoila Gamero de Tovar
Director, Data Warehousing and Data Administration	John Rome
Executive Director, Institutional Analysis/Data Administration/Strategic Planning	To Be Appointed
Director, International Programs	William G. Davey
Director, Center for Learning and Teaching Excellence	Duane Roen
Director, Summer Sessions	Carol Switzer
Executive Director, Division of Undergraduate Academic Services	To Be Appointed
Director, University Evaluation	To Be Appointed

ADMINISTRATIVE PERSONNEL

Barrett Honors College

Dean, the Barrett Honors College	Mark Jacobs
Associate Dean	Margaret Nelson
Associate Dean, Recruiting	Janet M. Burke

College of Architecture and Environmental Design

Dean, College of Architecture and Environmental Design	Wellington Reiter
Associate Dean, College of Architecture and Environmental Design	Lorraine M. Cutler
Associate Dean for Academic Affairs, College of Architecture and Environmental Design	<i>To Be Appointed</i>
Director, Ph.D. Program in Environmental Design and Planning	K. David Pijawka
Director, School of Architecture	Ronald McCoy
Director, School of Design	Jacques Giard
Director, School of Planning and Landscape Architecture	Hemalata Dandekar
Director, Herberger Center for Design Excellence	<i>To Be Appointed</i>
Coordinator, Joint Urban Design Program	John McIntosh
Coordinator, Joint Urban Design Studio	Michael Dollin

College of Education

Vice President for University-School Partnerships and Dean, College of Education	Eugene E. Garcia
Senior Associate Dean	Sarah J. Hudelson
Associate Dean, Teacher Education	Thomas E. Barone
Associate Dean for Research	James Arthur Middleton
Assistant Dean, Office of Student Services	Inta "Maggie" Tolan
Interim Director, Division of Curriculum and Instruction	Thomas E. Barone
Associate Director of Research and Graduate Education, Division of Curriculum and Instruction	Robert B. Rutherford Jr.
Associate Director for Professional Development and Induction, Division of Curriculum and Instruction	Billie J. Enz
Associate Director of Initial Teacher Certification, Division of Curriculum and Instruction	Elaine Surbeck
Director, Division of Educational Leadership and Policy Studies	Terrence G. Wiley
Assistant Director, Division of Educational Leadership and Policy Studies	Kay Hartwell Hunnicutt
Director, Education Policy Studies Laboratory	Alex Molnar
Academic Program Coordinator, DELTA Doctorate	Kay Hartwell Hunnicutt
Academic Program Coordinator, Ed.D. in Higher and Postsecondary Education	Caroline Turner
Academic Program Coordinator, Educational Leadership and Policy Studies	Gene V Glass
Academic Program Coordinator, M.Ed. in Educational Administration and Supervision	James E. Jurs
Academic Program Coordinator, M.Ed. in Higher and Postsecondary Education	Gary Hanson
Academic Program Coordinator, Social and Philosophical Foundations	Nicholas R. Appleton
Internship Coordinator and Certification, Educational Administration and Supervision	Donna J. Macey
Director, Division of Psychology in Education	Elsie G.J. Moore
Associate Director, Division of Psychology in Education	Stafford Hood
Training Director, Counseling Psychology	Richard T. Kinnier
Academic Program Leader, Counselor Education and Counseling Psychology	Patricia Arredondo
Academic Program Leader, Educational Technology	Wilhelmina C. Savenye
Academic Program Leader, Educational Psychology	Samuel B. Green
Training Director, School Psychology	Mary E. Stafford
Director, Counselor Training Center	Judith Homer
Director, Southwest Center for Education Equity and Language Diversity	Josué M. González
Director, Bureau of Educational Research and Services	Margaret A. Mangini
Interim Director, Center for Indian Education	Denis Viri
Director, Office of Professional Field Experiences	Karen Kimerer

College of Extended Education

See "ASU Extended Campus Administrative Personnel," page 701.

College of Law

Dean, College of Law	Patricia D. White
Associate Dean for Academic Affairs and Research	Patrick Brennan
Associate Dean and Director, Ross-Blakley Law Library	Victoria K. Trotta
Assistant Dean, Administrative and Business Services	Christopher Baier
Assistant Dean and Director of Admissions	Brenda Brock
Assistant Dean, Student Services	Leslie Mamaghani

ADMINISTRATIVE PERSONNEL

Executive Director, Indian Legal Program	Rebecca A. Tsosie
Executive Director, Center for the Study of Law, Science, and Technology	Gary E. Marchant
Executive Director, Clinical Programs	Catherine O'Grady
Director, Communications	Franklyn Jeans
Director, Center for the Study of Law, Science, and Technology	Andrew Askland
Director, Legal Research and Writing and Academic Success Program	Judith M. Stinson
Director, Student Development and Financial Aid	Michael Bossone
Director, Indian Legal Program	Kathlene Rosier
W. P. Carey Director of Placement	Ilona DeRemer

College of Liberal Arts and Sciences

Dean, College of Liberal Arts and Sciences	David A. Young
Associate Dean	Milton R. Sommerfeld
Associate Dean, Academic Programs	Daniel Bivona
Interim Associate Dean, Administration and Personnel	Simon M. Peacock
Chair, Department of Aerospace Studies	Colonel David Guthrie
Chair, Department of Anthropology	Sander van der Leeuw
Chair, Department of Chemistry and Biochemistry	Robert E. Blankenship
Chair, Department of Chicana and Chicano Studies	Cordelia C. Candelaria
Chair, Department of English	Neal Lester
Chair, Department of Family and Human Development	Richard A. Fabes
Chair, Department of Geography	Breandán Ó hUallacháin
Chair, Department of Geological Sciences	James A. Tyburczy
Chair, Department of History	Noel J. Stowe
Interim Chair, Department of Kinesiology	Daniel M. Landers
Chair, Department of Languages and Literatures	Deborah N. Losse
Chair, Department of Mathematics and Statistics	Andrew Bremner
Chair, Department of Military Science	Major Herbert M. Chong
Interim Chair, Department of Philosophy	Steven L. Reynolds
Chair, Department of Physics and Astronomy	Barry G. Ritchie
Chair, Department of Political Science	Patrick Kenney
Chair, Department of Psychology	Darwyn E. Linder
Chair, Department of Religious Studies	Joel D. Gereboff
Interim Director, School of Life Sciences	Morton E. Munk
Chair, Department of Sociology	Verna M. Keith
Chair, Department of Speech and Hearing Science	David Ingram
Interim Director, African American Studies	Patricia M. Neff
Director, Center for Asian Studies	Claudia Brown
Director, Cancer Research Institute	G. Robert Pettit
Director, Center for the Study of Early Events in Photosynthesis	Andrew N. Webber
Director, Climatology Laboratory	Robert C. Balling
Director, Computational Biosciences Program	Rosemary Renaut
Director, Hispanic Research Center	Gary D. Keller
Director, Interdisciplinary Humanities Program	Peter Lehman
Director, Interdisciplinary Committee for Molecular and Cellular Biology	Robert W. McGaughey
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Director, Latin American Studies Center	Tod D. Swanson
Director, Arizona Center for Medieval and Renaissance Studies	Robert E. Bjork
Director, Center for Meteorite Studies	Laurie Leshin
Director, Center for Solid State Science	David J. Smith
Director, Program for Southeast Asian Studies	James F. Eder Jr.
Director, Women's Studies Program	Mary L. Rothschild

College of Nursing

Dean, College of Nursing	Barbara A. Durand
Associate Dean for Graduate Programs and Research	Karen H. Sousa
Associate Dean for Undergraduate Programs and Extended Education	Mary Killeen
Director, Continuing and Extended Education	David P. Hrabe
Director, Student Services	Jean Craig Stengel
Chair, Division of Adult Health/Parent-Child Nursing	Susan Mattson
Chair, Division of Community Health/Psychosocial Nursing Systems	Rojann Alpers
Manager, Community Health Services Clinic	M. Christina Lyons

ADMINISTRATIVE PERSONNEL

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Dean, College of Public Programs	Anne L. Schneider
Associate Dean, College of Public Programs	Frederick C. Corey
Assistant Dean, College of Public Programs	Kathryn Gundersen
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Director, Hugh Downs School of Human Communication	Jess K. Alberts
Interim Director, Walter Cronkite School of Journalism and Mass Communication	Stephen (Steve) Doig
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Director, School of Public Affairs	Jeffrey Chapman
Director, School of Social Work	Leslie Leighninger
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Director, Asian Pacific American Studies Program	Thomas K. Nakayama
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Director, Center for Urban Inquiry	Peg Bortner

Division of Undergraduate Academic Services

Executive Director, Division of Undergraduate Academic Services	<i>To Be Appointed</i>
Associate Executive Director, Division of Undergraduate Academic Services	Gay W. Brack
Associate Executive Director, Division of Undergraduate Academic Services	Shelly Potts
Director, Academic Community Engagement Services	Janice M. Kelly
Director, Academic Success Programs	Stephen Rippon
Director, Academic Advising Services	Casey Self
Director, Bachelor of Interdisciplinary Studies	Kevin H. Ellsworth
Senior Program Coordinator, General Studies	Phyllis Lucie
Senior Business Manager	Kathleen Renshaw

Graduate College

Interim Dean, Graduate College	Maria T. Allison
Associate Dean, Student Support Services	Marjorie S. Zatz
Associate Dean, Academic Programs	Filiz Ozel
Assistant Dean, Academic Programs	Sarah B. Lindquist
Assistant Dean, Administrative Services and Information Systems	Kent D. Blaylock
Director, Graduate Admissions	Michael A. Dickson

Ira A. Fulton School of Engineering

Dean, Ira A. Fulton School of Engineering	Peter E. Crouch
Associate Dean, Academic Affairs	Ronald J. Roedel
Associate Dean, Planning and Administration	Ben M. Huey
Associate Dean, Research	Paul C. Johnson
Associate Dean, Student Affairs	Mary R. Anderson-Rowland
Director, Del E. Webb School of Construction	William W. Badger
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Chair, Department of Chemical and Materials Engineering	Subhash Mahajan
Chair, Department of Civil and Environmental Engineering	Sandra L. Houston
Chair, Department of Computer Science and Engineering	Sethuraman Panchanathan
Chair, Department of Electrical Engineering	Stephen M. Goodnick
Chair, Department of Industrial Engineering	Gary L. Hogg
Chair, Department of Mechanical and Aerospace Engineering	Robert E. Peck
Director, Engineering Core and Special Studies	Ronald J. Roedel
Interim Director, Center for Research on Education in Science, Mathematics, Engineering, and Technology	Marilyn P. Carlson
Codirector, Center for Low Power Electronics Research	Dieter K. Schroder
Director, Center for Professional Development	Jeffrey S. Goss
Director, Center for Solid State Electronics Research	Trevor John Thornton
Director, Institute for Manufacturing Enterprise Systems	Thomas E. Callarman

The Katherine K. Herberger College of Fine Arts

Dean, The Katherine K. Herberger College of Fine Arts	J. Robert Wills
Associate Dean, Research and Administration	Margaret M. Knapp
Assistant Dean, Student Services	Gina Stephens

ADMINISTRATIVE PERSONNEL

Director, School of Art	Jon W. Sharer
Chair, Department of Dance	<i>To Be Appointed</i>
Director, School of Music	Wayne A. Bailey
Chair, Department of Theatre	<i>To Be Appointed</i>
Director, Communications	Stacey Shaw
Director, Community Programs	Melanie Ohm
Director, Institute for Studies in the Arts	Thanassis Rikakis
Director, Public Art	Dianne Cripe
Director, ASU Art Museum	Marilyn A. Zeitlin
Senior Business Operations Manager	Marty Wyas

University Libraries

University Librarian and Dean	Sherrie Schmidt
Associate Dean, Library Services	<i>To Be Appointed</i>
Assistant Dean, Personnel	Kurt R. Murphy
Head, Access Services/Interlibrary Loan and Document Delivery	Ginny Sylvester
Head, Architecture and Environmental Design Library	Deborah H. Koshinsky
Head, Department of Archives and Manuscripts	Robert P. Spindler
Head, Government Documents/Map Collection	Brad T. Vogus
Head, Library Instruction, Systems, and Technology (LIST)	Scott S. Herrington
Head, Music Library	Brian Doherty
Head, Preservation	<i>To Be Appointed</i>
Team Leader, Noble Science Reference Services	Linda A. Shackle
Team Leader, Collection Development	Jeanne Richardson
Team Leader, Hayden Reference Services	Rosalinda DeFato
Team Management, Technical Services Department	Betsy J. Redman, Ronda L. Ridenour, and Rebecca S. Uhl

W. P. Carey School of Business

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Associate Dean, Asia Pacific Programs	Ker-Wei Pei
Associate Dean, Executive and Professional Programs	Lee R. McPheters
Associate Dean, Graduate Programs	Dennis L. Hoffman
Associate Dean, Undergraduate Programs	Philip R. Regier
Assistant Dean, Fiscal and Business Services	Anne Nguyen
Assistant Dean, Graduate Programs	Carl Harris
Assistant Dean, Undergraduate Programs	Kay Faris
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Director, Center for Services Leadership	Stephen W. Brown
Director, Bank One Economic Outlook Center	Lee R. McPheters
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Senior Executive Assistant to the Executive Vice President, Administration and Finance	Sheila Stokes
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Director, Internal Audit and Management Services	Walter B. Silva
Director, Administration and Finance Information Technology	Susan Madden
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Director	Joanne Wamsley
Associate Director	Terri Deasey

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 Assistant Director, Financial Services Laura James
 Assistant Director, Financial Services Edalia Kousari
 Assistant Director, Financial Services Kathleen Rogers
 Deputy Executive Vice President, University Services Scott Cole
 Director, Campus Planning Steve Nielsen
 Director, Capital Programs Management Group Ted Cary
 Director, Facilities Planning and Space Management David Techau
 Director, Facilities Management Dave Brixen
 Director, Risk Management *To Be Appointed*
 University Architect Ron McCoy
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 Director, Human Resources Programs *To Be Appointed*
 Director, Human Resources Operations and Administration Christine Cervantes
 Associate Vice President, Administration and Business Services Ray Jensen
 Director, Purchasing and Business Services John Riley
 Director, Auxiliary Business Services Greg Rush
 Director, ASU Bookstore Val Ross
 Assistant Director, Real Estate Karen Honeycutt
 Assistant Director, Document Production Services Robert Lane
 Assistant Director, Purchasing and Business Services Gina Webber
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 Assistant Chief of Police Kay Gojkovich
 Assistant Director of Parking and Transit Melinda Helton
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 Director, Budget Planning and Management James Sliwicki

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 Assistant Vice President for Public Affairs, Community and Constituent Outreach Nancy Jordan
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Virgil Renzulli	Gene Smith				

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Intercollegiate Athletics

Executive Director, Athletics	Gene Smith
-------------------------------	------------

ASU Head Coaches

Baseball—Men	Pat Murphy
Basketball—Men	Rob Evans
Basketball—Women	Charli Turner Thorne
Cross Country—Men and Women	Walt Drenth
Diving—Men and Women	Mark Bradshaw
Football—Men	Dirk Koetter
Golf—Men	Randy Lein
Golf—Women	Melissa Luellen
Gymnastics—Women	John Spini
Soccer—Women	Ray Leone
Softball—Women	Linda Wells
Swimming—Men and Women	Michael Chasson
Tennis—Men	Lou Belken
Tennis—Women	Sheila McInerney
Track and Field—Men and Women	Greg Kraft
Volleyball—Women	Brad Saindon
Water Polo—Women	Vicki Gorman
Wrestling—Men	Thom Ortiz

Research and Economic Affairs

Vice President for Research and Economic Affairs	Jonathan Fink
Associate Vice President for Research	Gregory B. Raupp
Associate Vice President, Economic Affairs	Rob Melnick
Assistant to the Vice President	Cynthia Ryan
Director, Fiscal and Business Services	Rich Fill
Executive Director, Financial Services	Jay Murphy
Director, AZ Biodesign	George Poste
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Director, Center for Environmental Studies	Charles L. Redman
Director, Partnership for Research in Spatial Modeling Program (PRISM)	Anshuman Razdan
Director, Animal Care and Technology	Michael McGarry
Director, Southwest Center for Environmental Research and Policy	Joseph Zehnder
Director, Radiation Safety Office	Kenneth L. Mossman

Student Affairs

Vice President for Student Affairs	Juan C. Gonzalez
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Associate Dean, Student Development, and Director, Memorial Union	Sally Ramage
Assistant Dean, Student Development, and Director, Student Involvement	Mary Skorheim
Director, Arizona Prevention Resource Center	Gail Chadwick
Director, Career Services	Raymond I. Castillo
Director, Recreational Sports	Howard Taylor
Director, Residential Life, and Assistant Dean, Student Development	Kevin Cook
Director, Student Health and Wellness Center	Mary Rimsza
Director, Student Media	Kristin Gilger

Undergraduate University Initiatives

Vice President for Undergraduate University Initiatives	James A. Rund
Director, Student Affairs Computing Services	Mike Schaefer
Interim Director, Student Financial Assistance	Craig Fennel
Director, Undergraduate Admissions	Tim Desch
Registrar	Lou Ann Denny

ASU East

See "ASU East Administrative Personnel," page 671.

ASU Extended Campus

See "ASU Extended Campus Administrative Personnel," page 701.

ASU West

See "ASU West Administrative Personnel," page 688.

ASU East

www.east.asu.edu

Charles E. Backus, Ph.D., Provost, ASU East; Vice President, ASU

Morrison School of Agribusiness and Resource Management	605
East College	614
Department of Applied Biological Sciences	616
Faculty of Applied Psychology	621
Faculty of Business Administration	623
Faculty of Education	624
Department of Exercise and Wellness	628
Faculty of Human Health Studies	631
Faculty of Multimedia Writing and Technical Communication	632
Department of Nutrition	634
College of Technology and Applied Sciences	638
Department of Aeronautical Management Technology	642
Department of Electronics and Computer Engineering Technology	646
Department of Information and Management Technology	653
Department of Mechanical and Manufacturing Engineering Technology	659
Map	664
Directory	665
Faculty and Academic Professionals	666
Administrative Personnel	671

Arizona State University East, one of the four ASU campuses, is distinguished by the academic programs it offers and by its residential setting. As ASU's polytechnic campus, ASU East offers a variety of professionally oriented undergraduate and graduate programs that are applicable to the real world and require high levels of technological literacy and skill.

The Morrison School of Agribusiness and Resource Management offers bachelor's and master's degrees in Agribusiness that prepare students for careers that are in sectors of global business that are in high demand. The College of Technology and Applied Sciences offers bachelor's pro-

grams and a master's degree in several specialized areas of technology. East College offers a broad range of undergraduate and graduate degrees that teach students how to apply professional and liberal arts studies to real life. East College also provides the general education courses for all the ASU East degree programs.

All three academic units at ASU East offer the Bachelor of Applied Science (B.A.S.) degree, a program designed specifically as a career progression degree for students holding the Associate of Applied Science (A.A.S) degree. The B.A.S. emphasizes management, leadership, and communication skills along with additional technical course work.

Eighteen baccalaureate degree programs, six master's degree programs, and two certificate programs are currently offered at ASU East. Through partnerships with programs at ASU Main, select doctoral programs are also offered. (See the "Morrison School of Agribusiness and Resource Management Baccalaureate Degrees and Majors" table, page 606; the "East College Baccalaureate Degrees and Majors" table, page 615; and the "College of Technology and Applied Sciences Baccalaureate Degrees and Majors" table, page 639).

Located 23 miles southeast of ASU Main and with a student population of fewer than 5,000, the 600-acre campus offers a small residential college environment. ASU East students learn in high-tech, mediated classrooms and practice in fully equipped laboratories. They enjoy small classes, friendly and accessible faculty, opportunities for student leadership, and academic support services dedicated to helping them grow, learn, and graduate. ASU East graduates move into the world of work with knowledge and skills that help them succeed in their careers and in their personal and civic lives.

The campus is easily accessible via major interstate routes. See the "ASU East" map, page 664. For information, call 480/727-EAST (3278) or access the Web site at www.east.asu.edu.

ACADEMIC ORGANIZATION AND ACCREDITATION

The chief academic officer of ASU East is the provost. There are two colleges and one school at ASU East administered by deans. These academic units develop and implement the teaching, research, and service programs of the institution. Additional support for the academic mission of the campus is provided by Library Services and Information Technology, each administered by a director. See "ASU East Faculty and Academic Professionals," page 666, and "Academic Organization," page 10.