

DEPARTMENT OF LANGUAGES AND LITERATURES

GER 319 Business Correspondence and Communication G	3
GER 334 Special Topics	4
GER 413 German Civilization III/II	3
GER 416 German Civilization III/II	3
GER 445 German Literature: Eighteenth Century Classics	3
GER 451 German Literature: Biedermeier, Naturalism	3
GER 494 Special Topics	4
Two 200-level GER courses	6
<b>Total</b>	<b>33</b>

In addition to the courses, the student must meet with an advisor and choose at least 15 semester hours of courses from appropriate social and behavioral science, humanities, business courses, and other language courses.

**Italian B.A.**

**Required**

ITA 311 Italian Composition and Conversation G	3
ITA 312 Italian Composition and Conversation G	3
ITA 325 Introduction to Italian Literature HL	3
Two 200-level ITA courses	6
<b>Total</b>	<b>15</b>

Note: ITA 394 Commercial Italian may substitute for either ITA 311 or 312.

Fifteen semester hours are required from the following list, including at least nine semester hours from the 400 level:

ITA 314 Advanced Italian G	3
ITA 334 Special Topics	1-4
ITA 413 Italian Civilization L/HU/G	3
ITA 420 Italian Cinema	3
ITA 425 Italian American Culture L/G	3
ITA 430 Italian Literature of the Middle Ages HL	3
ITA 441 Dante <i>Divina Commedia</i> L/HU	3
ITA 443 Italian Literature of the Renaissance HU/H	3
ITA 446 Italian Literature of the 15th and 16th Centuries HU	3
ITA 449 18th Century Italian Literature HL/G	3
ITA 494 Special Topics	1-4
ITA 499 Individualized Instruction	1-3

In addition to the courses shown above, the student must meet with an advisor and choose at least 15 semester hours of courses from appropriate social and behavioral science, humanities, business courses, and other language courses.

**Russian—B.A.**

**Required**

RUS 211 Basic Russian Conversation G	3
RUS 312 Basic Russian Conversation G	3
RUS 311 Russian Composition and Conversation G	3
RUS 312 Russian Composition and Conversation G	3
RUS 411 Advanced Composition and Conversation I G	3
or RUS 412 Advanced Composition and Conversation I G	3
<b>Total</b>	<b>15</b>

Fifteen semester hours are required from the following list, including at least six semester hours from the 400 level:

RUS 333 Scientific Russian	3
RUS 334 Scientific Russian	3

RUS 321 Survey of Russian Literature HL/HU	3
RUS 322 Survey of Russian Literature L/HU	3
RUS 323 Survey of Literature of the Soviet Era L/HU/G	3
RUS 411 Advanced Composition and Conversation I G	3
RUS 412 Advanced Composition and Conversation II G	3
RUS 417 Applied Russian Phonetics	3
RUS 420 Russian Poetry L/HU	3
RUS 421 Pushkin L/HU	3
RUS 422 Dostoevsky L/HU	3
RUS 424 Tolstoy L/HU	3
RUS 425 Chekhov L/HU	3
RUS 426 Literature of the Nationalities of the Former Soviet Union L/HU/G	3
RUS 43 Russian Short Story L/HU	3
RUS 44 History of the Russian Language	3
RUS 441 Survey of Russian Culture L/HU/G/H	3
RUS 494 Special Topics	4
RUS 499 Individualized Instruction	3

In addition to the courses shown above, the student must meet with an advisor and choose at least 15 semester hours of courses from appropriate social and behavioral science, humanities, business courses, and other language courses.

**Spanish—B.A.**

**Required**

SPA 313 Spanish Conversation and Composition G	3
or SPA 313 Spanish Conversation and Composition for Bilinguals	3
SPA 314 Spanish Conversation and Composition G	3
or SPA 314 Spanish Conversation and Composition for Bilinguals	3
SPA 325 Introduction to Hispanic Literature HL	3
SPA 412 Advanced Conversation and Composition G	3
SPA 425 Spanish Literature HL	3
Choose two courses below	6
SPA 426 Spanish Literature HL	3
SPA 427 Spanish American Literature L	3
SPA 428 Spanish American Literature L/G	3
Choose one course below	3
SPA 471 Conversation of the Spanish Southwest HL	3
SPA 472 Spanish American Civilization HL/G/H	3
SPA 473 Spanish Civilization HL/SB/G	3
<b>Total</b>	<b>24</b>

**Electives**

Two upper division 300-400 level SPA courses

**Related Fields**

POR 101 Elementary Portuguese	3
POR 201 Intermediate Portuguese G	3

In addition to these courses, the student must meet with an advisor and choose at least six semester hours of courses from appropriate social and behavioral science, humanities, business courses, and other non-language courses.

SPA 311 and 312 are not counted toward the major or minor in Spanish.

Literary and Drama MA mathematical CS computer and quantitative application HU human and fine arts SB social and behavioral science SG natural science general core SQ international qualitative culture diversity United States G global history See General Studies page 83

**COLLEGE OF LIBERAL ARTS AND SCIENCES**

**MINORS**

Each minor in Asian Languages (Chinese/Japanese, French, German, Italian, Russian, and Spanish) consists of 18 hours of which 12 hours must be in the upper division. In addition, specific required courses for each area follow and are in a brochure in the department.

**Chinese**

**Required**

- CHI 313 Third Year Chinese I G . . . . . 3
- CHI 314 Third Year Chinese II G . . . . . 3

Consult with the departmental advisor for other courses.

**French**

**Required**

- FRE 311 French Conversation G . . . . . 3
- FRE 312 French Composition G . . . . . 3
- FRE 321 French Literature L/HU II . . . . . 3  
or FRE 322 French Literature L/HU III

Consult with the departmental advisor for other courses. Twelve hours must be at the 300 level or above.

**German**

**Required**

- GER 311 German Conversation G . . . . . 3  
or CER 312 German Conversation G
- CER 313 German Composition G . . . . . 3
- One 400 level CER course . . . . . 3
- Upper division GER course . . . . . 3

Consult with the departmental advisor for other courses.

**Italian**

**Required**

- ITA 313 Italian Composition and Conversation G . . . . . 3  
or ITA 312 Italian Composition and Conversation G  
or ITA 394 Special Topics
- ITA 325 Introduction to Italian Literature HU . . . . . 3
- One 400 level ITA course . . . . . 3

Consult with the departmental advisor for other courses.

**Japanese**

**Required**

- JPN 313 Third Year Japanese I G . . . . . 3
- JPN 314 Third Year Japanese II G . . . . . 3

Consult with the departmental advisor for other courses.

**Russian**

**Required**

- RUS 303 Scientific Russian . . . . . 3
- RUS 304 Scientific Russian . . . . . 3
- RUS 311 Russian Composition and Conversation G . . . . . 3
- RUS 312 Russian Composition and Conversation G . . . . . 3

RUS 211 and 212 are the only lower division courses that may count toward the Russian minor.

Consult with the departmental advisor for other courses.

**Spanish**

The minor in Spanish requires a minimum of 18 upper division semester hours.

**Required**

- SPA 313 Spanish Conversation and Composition G . . . . . 3  
or SPA 312 Spanish Conversation and Composition  
for Bilinguals
- SPA 314 Spanish Conversation and Composition G . . . . . 3  
or SPA 316 Spanish Conversation and Composition  
for Bilinguals
- SPA 325 Introduction to Hispanic Literature HU . . . . . 3
- SPA 412 Advanced Conversation and Composition G . . . . . 3
- SPA 471 Civilization of the Spanish Southwest HU . . . . . 3  
or SPA 472 Spanish American  
Civilization HU/G/H 3  
or SPA 473 Spanish Civilization HU/SB/C 3

SPA 311 and 312 are not counted toward the major or minor in Spanish.

**CERTIFICATES AND EMPHASES**

The following are certificate programs or emphases offered in the Department of Languages and Literatures. For more information, see "Certificate Programs and Areas of Emphasis," page 336.

**Asian Studies Certificate.** Foreign language students majoring in Asian Languages (Chinese/Japanese) may elect to pursue an Asian Studies Certificate combining courses from the major with selected outside courses of wholly Asian content.

**Classical Studies.** Any undergraduate may earn a certificate in classical studies.

**Latin American Studies Certificate.** Foreign language students majoring in Spanish 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 Certificate.** Any undergraduate major can earn a Russian and East European Studies Certificate by successfully completing one of the options mentioned in the section on "Russian and East European Studies" page 338.

**Scandinavian Studies Certificate.** Any undergraduate major can earn a Scandinavian Studies Certificate.

**Southeast Asian Studies Certificate.** To earn a Southeast Asian Studies Certificate, a student must complete a minimum of 40 semester hours of course work related to Southeast Asia, including two years (20 semester hours) of a Southeast Asian language.

**Translation Certificate (Spanish/English).** The Translation Certificate program is designed to provide the advanced training required for professional translation in both public and private sectors, preparation for the rigorous examinations required by national and international agencies, and training as an ancillary skill for professional fields, such as international business, public health and medicine, and law, in accordance with guidelines recommended by the American Translators' Association. The certificate is a nondegree

program consisting of 12 semester hours of course work and two hours of in service practicum primarily into the receptor language of English from the source language of Spanish. It may be taken simultaneously with course work leading to an undergraduate or graduate degree, as a related area sequence, or as the sole program of study for members of the community who meet the admission requirements of the certificate program and are enrolled in the university. A complete brochure is available at the Department of Languages and Literatures in LL 440.

While the certificate program is not yet available in French, FRE translation courses may be available. See the *Schedule of Classes* for course offerings.

**Admission Requirements.** Since entrance to professional translation is through work, cultural experience, and examination, the two entrance requirements to this certificate program are (1) written proficiency examination in the source and the receptor languages at the level of completion of the fourth year or most advanced composition course in Spanish, which at ASU is SPA 412, and (2) either in academic year at a university in a Spanish speaking country, an extensive work experience using Spanish, or demonstrate bilingual facility, both written and oral, in English and Spanish.

**Certificate Requirements.** The certificate program consists of the following requirements:

**Prerequisites**

FLA 400 Linguistics/SB .....	3
or SPA 494 ST Introduction to Hispanic Linguistics or equivalent	
SPA 413 Advanced Spanish Grammar G.....	3
SPA 494 ST: exicography .....	3

**Required**

FLA 401 Translation Theory and Practice .....	3
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**In Service Practicum**

FLA 484 Internship .....	2
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Also required are nine hours of applied translation electives in specialized areas chosen from the following courses:

FLA 481 Technical and Scientific Translation .....	
FLA 482 Business and Financial Translation .....	
FLA 483 Medical and Legal Translation .....	3
FLA 485 Problems of Literary Translation .....	3

**B.I.S. CONCENTRATION AREAS**

Students seeking to focus on a language as one of their concentration areas for the Bachelor of Interdisciplinary Studies degree may choose from Chinese, French, German, Italian, Japanese, Russian, and Spanish. They may also choose from any of the approved certificate programs. The requirements for the Bachelor of Arts in Interdisciplinary Studies B.I.S. concentrations are the same for the minor in that language. See "Minors," page 402, for specific course requirements. For more information, see "Division of Undergraduate Academic Services," page 113.

**SECONDARY EDUCATION—B.A.E.**

**French, German, and Spanish.** Each of the major teaching fields in French, German, and Spanish consists of 45 semester hours of which 30 must be in one language and 15 in a second language or in closely related fields to be approved by the advisor in consultation with the student. Of the 30 hours required for the academic specialization, a minimum of 24 hours must be taken at the 300 or 400 level and must include at least nine hours at the 400 level. Specific required courses for each major area are listed in curriculum check sheets of the individual language areas available in the department.

Applications are not being accepted at this time for Chinese, Japanese, and Russian.

**GRADUATE PROGRAMS**

The faculty in the Department of Languages and Literatures offer programs leading to the M.A. degree in French, German, and Spanish and the Ph.D. degree in Spanish. See the *Graduate Catalog* for requirements.

**FOREIGN LANGUAGES FOR INTERNATIONAL PROFESSIONS**

The sequence of two semesters, listed under numbers 107 and 207 in two languages, French and Spanish, integrates an accelerated study, a functional approach to course design, and preparation for international professions, e.g., business, diplomacy, international political economy. It is parallel to the traditional sequence of 101 through 202 and also satisfies the college's foreign language requirement. The sequence differs from traditional basic language programs in that all aspects of the language—vocabulary, grammar, and skill development—are practiced within the context of authentic communication for social and professional purposes in the target culture. Classes meet eight hours weekly, for eight semester hours in each of two semesters.

Students who have had success in learning one foreign language are encouraged to join this program in a second language. Students should contact the Department of Languages and Literatures before registration.

**FOREIGN LANGUAGE REQUIREMENT**

The College of Liberal Arts and Sciences requires knowledge of one foreign language equivalent to the completion of two years' study at the college level. This normally includes a sequence of courses numbered 101 and 102 and 201 and 202 or 107 and 207. However, important exceptions exist in Greek, Latin, Portuguese, and Romanian.

**Greek.** To satisfy the foreign language requirement, students must take GRK 301 and 302.

**Latin.** Students entering LAT 202 directly from LAT 102 must complete LAT 201 to satisfy the College of Liberal Arts and Sciences requirement.

Liberal Arts and Sciences Department  
 L t y and rt a nqury MA thematic CS computer statist  
 qualitative app ion HU humane and fine rt SB a and  
 beha ora en SG atua sc ne e era c re or SQ natu  
 ce e q a t t e C c l t u a d e r s i t y n e n t e t a t e G g o b a  
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**Portuguese.** To satisfy the foreign language requirement, students must take POR 314 or a higher numbered POR course.

**Romanian.** To satisfy the foreign language requirement, students must complete ROM 314.

### FOREIGN LANGUAGE PLACEMENT

Students who transfer from other postsecondary institutions with foreign language credits below the 202 level are placed in a course at the level directly above the work completed.

Students who have completed their secondary education at a school in which the language of instruction was not English are considered to have satisfied the foreign language requirement. Certification of this status is made at the time of admission to ASU.

Questions should be addressed to the International Admissions program within Undergraduate Admissions. For more information call 480 965 2688, or visit the Web site at [www.asu.edu/admissions](http://www.asu.edu/admissions).

The foreign language requirement can be met in languages not taught at ASU either by transferring credit from another institution or by passing a proficiency examination. When possible, the Department of Languages and Literatures recommends to the college an appropriate source for such examinations and proctors thereof. Grading is done by the institution that provides the examination, and the student pays any costs incurred. The examination can be used only to demonstrate proficiency; it does not produce semester hours of credit.

Students desiring placement above the 101 level course in French, German, or Spanish should take the placement exam for that language in the Computer Language Laboratory in LL 65.

Ordinarily no placement or proficiency examination is administered to students who wish to continue studying languages for which high school credits have been earned. Students should be guided by the following principles of equivalency: (1) one unit/one academic year of high school level study is considered for placement purposes only, to equal one semester of study of the same language at the university level. Thus, students with one year of high school study would enroll in the second semester course (102), students with two years of high school study, in the third semester course (201), and so on. (2) Students who feel that their high school language preparation was inadequate may choose to place themselves in a lower level, but not lower than 111 with two or three years of high school study and 201 with four years of high school study.

Students with prior knowledge of a language may meet the college foreign language requirement in any one of the following ways:

1. by satisfactory results in a nonrepeatable college approved proficiency examination;
2. by achieving a grade of at least "C" in the last course of the required sequence; or
3. by achieving a grade of at least "C" in a course taught in the language for which the last course of the required sequence is a prerequisite.

Students are expected to follow the progressive sequence of 100, 200, and 300. Once a grade of "C" or higher is earned in a 300 level class in a language, students may not earn lower division credit in that language.

First year foreign language courses taught by the Department of Languages and Literatures are not open to students who have spent one or more years in a country where that language is the predominant language. Individual language areas may have different policies. Students with questions about this policy should check with the appropriate language coordinator in the department.

If transfer students are uncertain about course equivalencies, they should contact the Department of Languages and Literatures.

### LANGUAGE LABORATORY REQUIREMENT

All students enrolled in 101, 102, 201, and 202 language courses are expected to spend a minimum of one hour per week in the language laboratory or in other assigned audio-lingual tape exercises in addition to the regular class periods.

### FOREIGN LANGUAGES (FLA)

#### FLA 150 Introduction to East Asian Culture (3)

*spring*  
Introduces the cultures of China, Japan, and Korea.  
*General Studies: HU G*

#### FLA 323 Survey of Literature of the Soviet Era in Translation. (3)

*fall and spring*  
Surveys major literary movements prominent author, most significant works of prose, poetry, and drama of the Soviet period, 1917-1991.  
*General Studies: LHU G*

#### FLA 400 Linguistics. (3)

*spring*  
Introduces the analysis of language and its use in a context: phonetics, morphology, phonology, pragmatics, semantics, syntax, and variation. Prerequisites: junior standing, instructor approval.  
*General Studies: SB*

#### FLA 401 Translation Theory and Practice. (3)

*selected semesters*  
Translation theory and practice of a practical methodology, computer technology, and sample texts for natural and social sciences and humanities. Prerequisite: 4th year composition or instructor approval, respective language area.

#### FLA 415 Bilingualism and Languages in Contact. (3)

*fall*  
Analyzes linguistic aspects of bilingualism, e.g., pidgins and creoles, code-switching, and other contact phenomena. Simultaneous acquisition of a language. Prerequisite: FLA 400 or its equivalent, or instructor approval.

#### FLA 420 Foreign Literature in Translation. (3)

*fall and spring*  
Not for language majors, except in Asian languages and Russian; open to language majors as a related area course. Graduate students by permission of Topic may include the following:

- Brazilian
  - Chinese
  - French
  - German
  - Greek
  - Italian
  - Latin
  - Portuguese
  - Russian
  - Soviet
  - Spanish
  - Spanish American
- General Studies: HU G*

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### FLA 421 Japanese Literature in Translation. (3)

*fa and spr ng*

Readings selected by theme or genre or period from various works of Japanese literature in English translation. May be repeated when topics vary. Graduate students by permission. Prerequisite: a General Studies L course.

*General Studies: HU G*

### FLA 480 Methods of Teaching Foreign Languages. (3)

*fa*

Teaching foreign languages and literatures at secondary and college levels. Does not meet the Liberal Arts and Sciences General Studies requirement for humanities and fine arts. Required for admission to SED 478. Prerequisite: 12 hours of upper division courses in foreign language.

### FLA 481 Technical and Scientific Translation. (3)

*selected semesters*

Resources, practices, strategies, and exercises for translation of professional texts in subjects such as engineering architecture, agriculture, computer technology, electronics, and biology and botany. Prerequisite: FLA 401.

### FLA 482 Business and Financial Translation. (3)

*selected semesters*

Resources, practices, strategies, and exercises for translation of professional texts in subjects such as economics, finance, insurance, management, marketing, accounting, advertising, and real estate. Prerequisite: FLA 401.

### FLA 483 Medical and Legal Translation. (3)

*selected semesters*

Resources and strategies for translation of professional texts in subjects such as medicine, nursing, public health, criminal justice, and international law. May be repeated for a total of 6 semester hours. Prerequisite: FLA 401.

### FLA 484 Internship. (1-2)

*selected semesters*

### FLA 485 Problems of Literary Translation. (3)

*selected semesters*

Theory and practice with emphasis on application through individual translation projects. May be repeated for a total of 6 semester hours. Prerequisite: FLA 401 or instructor approval in the respective language area.

### FLA 494 Special Topics. (1-4)

*selected semesters*

Various topics.

### FLA 515 Second Language Acquisition. (3)

*spring*

Discussion and application of theories of second language acquisition. Prerequisite: FLA 400 or its equivalent.

### FLA 525 Trends and Issues in Foreign Language Teaching. (3)

*selected semesters*

Advanced methods seminar designed for experienced teachers.

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog, see Omnibus Courses, page 56.

## ARABIC (ARB)

### ARB 101 Elementary Arabic. (4)

*fa*

Reading, writing, speaking, and understanding basic Arabic. 4 hours lecture, 1 hour lab.

### ARB 102 Elementary Arabic. (4)

*spring*

Reading, writing, speaking, and understanding basic Arabic. 4 hours lecture, 1 hour lab. Prerequisite: ARB 101 or its equivalent.

### ARB 201 Intermediate Arabic. (4)

*fa*

Review of Arabic grammar with emphasis on the development of the skills of listening, comprehension, reading, speaking, and writing. 4 hours lecture, 1 hour lab. Prerequisite: ARB 102 or its equivalent. *General Studies: G*

### ARB 202 Intermediate Arabic. (4)

*spring*

Review of Arabic grammar with emphasis on the development of the skills of listening, comprehension, reading, speaking, and writing. 4 hours lecture, 1 hour lab. Prerequisite: ARB 201 or its equivalent. *General Studies: G*

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog, see Omnibus Courses, page 56.

## CHINESE (CHI)

### CHI 101 First-Year Chinese I. (5)

*fa*

Pronunciation, grammar, elementary conversation, and development of basic reading and writing skills. Standard 5 class hours. Fee.

### CHI 102 First-Year Chinese II. (5)

*spring*

See CHI 101. Fee. Prerequisite: CHI 101 or its equivalent.

### CHI 201 Second-Year Chinese I. (5)

*fa*

Systematic review of grammar. Development of vocabulary through reading and writing. Discussion and oral skills. 5 class hours. Fee. Prerequisite: CHI 102 or its equivalent. *General Studies: G*

### CHI 202 Second-Year Chinese II. (5)

*spring*

See CHI 201. Fee. Prerequisite: CHI 201 or its equivalent. *General Studies: G*

### CHI 205 Chinese Calligraphy. (1)

*fa and spring*

Introduction to styles and techniques of Chinese writing. Requires no knowledge of Chinese or Japanese.

### CHI 309 Chinese Conversation. (2)

*fa*

Aural/oral discussion of contemporary stories, articles, and essays. For students with lower-level proficiency. Prerequisite: CHI 202.

### CHI 310 Chinese Conversation. (2)

*spring*

See CHI 309. Prerequisite: CHI 202.

### CHI 311 Chinese Conversation. (2)

*fa*

Intensive aural/oral practice in modern Chinese. For students who have lived in China or a Chinese speaking environment. Discussion and writing. Prerequisite: CHI 202.

### CHI 312 Chinese Conversation. (2)

*spring*

See CHI 311. Discussion and writing. Prerequisite: CHI 202.

### CHI 313 Third-Year Chinese I. (3)

*fa*

Expansion of proficiency in listening, comprehension, speaking, reading, and writing. Lecture, 3 hours; discussion and writing. Prerequisite: CHI 202 or its equivalent. *General Studies: G*

### CHI 314 Third-Year Chinese II. (3)

*spring*

Continuation of CHI 313. Prerequisite: CHI 313 or its equivalent. *General Studies: G*

### CHI 321 Chinese Literature. (3)

*fa*

Masterworks of the tradition from the 6th century B.C.E. through the 13th century. Readings, lectures, and examinations are in English. *General Studies: LHU*

Literary and cultural inquiry. **MA** mathematics. **CS** computer literacy. **QU** quantitative applications. **HU** humanities and fine arts. **SB** science and behavior science. **SG** natural science and general education core course. **SQ** advanced quantitative. **C** cultural diversity. **the** United States. **G** global. **H** history. See *General Studies*, page 83.

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### CHI 322 Chinese Literature. (3)

*spring*

Masterpieces from the later tradition and its transition to modern times. Readings, lectures, and examination are in English. *General Studies LHU G*

### CHI 345 Chinese Film and Civilization. (3)

*once a year*

Screening and discussion of recent films from China, Taiwan, and Hong Kong in the context of modern Chinese civilization. Lecture, discussion, screening.

### CHI 413 Introduction to Classical Chinese. (3)

*fall*

Reading in various genres of pre-20th century literature, wenyan with analysis of the structure of the classical writings. Prerequisite: CH 314 or instructor approval. *General Studies HU*

### CHI 414 Introduction to Classical Chinese. (3)

*spring*

Continuation of CHI 413. Prerequisite: CHI 413. *General Studies H*

### CHI 494 Special Topics. (1-4)

*selected semesters*

### CHI 499 Individualized Instruction. (1-3)

*selected semesters*

### CHI 500 Bibliography and Research Methods. (3)

*selected semester*

Introduces research materials on Chinese, Chinese, Japanese and Western languages. Overview of research methods. Lecture, discussion.

### CHI 514 Advanced Classical Chinese. (3)

*selected semesters*

Close reading in selected premodern texts with focus on specific grammatical features, and increased vocabulary. Lecture, discussion.

### CHI 520 Teaching of Chinese as a Second Language. (3)

*selected semesters*

Theory and practice of teaching Chinese, including presentation, interaction, and evaluation with consideration given to cultural factors. Lecture, discussion.

### CHI 535 Advanced Readings. (3)

*selected semesters*

Readings in primary and secondary sources in history, art, religious studies, economics, or other fields. Lecture, discussion.

### CHI 543 Chinese Language and Linguistics. (3)

*fall*

Analysis and discussion, within the framework of linguistic theory of selected problems in Chinese phonetics, morphology, and syntax. Lecture, discussion.

### CHI 585 Problems of Translation. (3)

*selected semesters*

Theories and practice of translation, strategies for handling a variety of Chinese texts. Lecture, discussion.

### CHI 591 Seminar. (3)

*selected semesters*

Topics in literary linguistics or cultural studies.

**Omnibus Courses.** For an explanation of courses offered but not specified in this catalog, see Omnibus Courses, page 56.

## FRENCH (FRE)

### FRE 101 Elementary French. (4)

*fall, spring, summer*

Intensive, audio-oral, direct class and laboratory-based grammar supported by sample prose readings. Not open to students with credit for FRE 111. 4 hours lecture, 1 hour lab fee.

### FRE 102 Elementary French. (4)

*fall, spring, summer*

See FRE 101. Fee. Prerequisite: FRE 101 or its equivalent.

### FRE 107 French for International Professions I. (8)

*fall*

Accelerated alternative to FRE 101 and 102 or FRE 111. Functional approach. Emphasizes communicative competence for international profession. Fee.

### FRE 111 Fundamentals of French. (4)

*fall and spring*

Prerequisite for students with two years of high school French who need review to enter second year study. Not open to students with credit for FRE 101 or 102 or 107. 4 hours lecture, 1 hour lab fee.

### FRE 201 Intermediate French I. (4)

*fall, spring, summer*

Grammar review with emphasis on development of skills of speaking, reading, writing, and listening comprehension. 4 hours lecture, 1 hour lab fee. Prerequisite: FRE 102 or 111 or its equivalent.

*General Studies G*

### FRE 202 Intermediate French II. (4)

*fall, spring, summer*

Continuation of grammar review with emphasis on development of skills in speaking, reading, writing, and listening comprehension. 4 hours lecture, 1 hour lab fee. Prerequisite: FRE 201 or its equivalent.

*General Studies G*

### FRE 205 Readings in French Literature. (3)

*fall, spring, summer*

Designed to teach reading with facility and comprehension. Various literary and textual analyses of literary genres are major elements. Prerequisite: FRE 202 or its equivalent.

*General Studies G*

### FRE 207 French for International Professions II. (8)

*spring*

Continuation of FRE 107. Alternative to FRE 201, 202 sequence. Expansion of communicative proficiency in specific areas of international professions. Fee. Prerequisite: FRE 107 or instructor approval.

*General Studies G*

### FRE 311 French Conversation. (3)

*fall and spring*

Further practice in speaking French, emphasis on current usage and promoting facility in the expression of ideas. Prerequisite: 8 hours of 200-level French or its equivalent.

*General Studies G*

### FRE 312 French Composition. (3)

*fall and spring*

Further practice in writing French, emphasizing current usage and promoting facility in the expression of ideas. Prerequisite: 8 hours of 200-level French or its equivalent.

*General Studies G*

### FRE 315 French Phonetics. (3)

*fall*

Practice and theory of French pronunciation. Emphasizes standard French, although an overview of regional varieties is offered. Lecture, lab. Prerequisite: FRE 311 or its equivalent.

### FRE 319 Business French. (3)

*spring*

Introduces the structure, vocabulary, and practices of the French business world. Prerequisite: FRE 312 or instructor approval.

*General Studies G*

### FRE 321 French Literature. (3)

*fall and spring*

Representative masterpieces and significant movements of French literature of the Middle Ages through the 18th century. Prerequisite: FRE 205 or its equivalent.

*General Studies LHU H*

### FRE 322 French Literature. (3)

*fall and spring*

Literature of the 19th and 20th century. Prerequisite: FRE 205 or its equivalent.

*General Studies LHU*

### FRE 411 Advanced Spoken French. (3)

*fall and spring*

Improvement of spoken French. Prerequisites: FRE 311 and 6 hours of 300-level French or the equivalent.

*General Studies G*

### FRE 412 Advanced Written French. (3)

*fall and spring*

Improvement of composition skills. Prerequisites: FRE 312 and 6 hours of 300-level French or the equivalent.

*General Studies G*

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### **FRE 415 French Civilization I. (3)**

*spring*

Po t a nte ctua soca e onom c and art st c deve opment of France from ts org ns to the end of the 7th ce tury Prerequ s te: 6 ho rs of upper d v s on French

*Genera Stud es HU*

### **FRE 416 French C'v lization II. (3)**

*spring*

Po t a nte ctua , soca e onom c and art st c deve opm nt of France from the 18th century to present Prerequ s te: 6 hours of upper d v s on French

*Genera Stud es HU G*

### **FRE 421 Structure of French. (3)**

*fa*

Phonology morpho ogy syntax semant cs, and var etes of French Prerequ s tes both FRE 311 a d 312 or on y nstruct r approva .

### **FRE 422 Applied French Linguistics. (3)**

*spring*

App es ngu st c theory and econd nguage a qu s t on theory to teach ng of French Prerequ s te: ASB 480 or ENG 213 or FLA 400

### **FRE 423 French Syntax. (3)**

*spring*

Ana yzes French yntact c structure by c ntemporary theoret ca mod e s Prerequ s te: ASB 480 or ENG 213 or FLA 400

### **FRE 424 French Phonology. (3)**

*se ected semesters*

ntroduces phono ogy ca theory and ts app cat on to French Prerequ s tes both FRE 311 and 312 r on y nstructor approva

### **FRE 441 French Literature of the 17th Century. (3)**

*fa*

From 1600 to 1660 Prerequ s tes both FRE 321 and 6 hours f 300 eve French or on y st u t r approva

*Genera Stud es HU*

### **FRE 442 French Literature of the 17th Century. (3)**

*spring*

From 1660 to 1700 Prerequ s tes: bot FRE 321 and 6 hours of 300 eve French or on y nstructor approva

*Genera Stud es H H*

### **FRE 445 French Literature of the 18th Century. (3)**

*se ected semesters*

Contr but ons of the ph osophers and the deve opment of the nove and drama Prerequ s tes both FRE 321 and 6 hours of 300 eve Fre ch or n y nstructor approva

*Gene a Stud es HU*

### **FRE 451 French Poetry of the 19th Century. (3)**

*spring*

From R mant c sm to Parnass an poetry to Symbo sm Prerequ s te both FRE 322 and 6 ho rs of 300 eve French or on y nstruct r approva

### **FRE 452 French Novel of the 19th Century. (3)**

*fa*

From Constant Hugo Ba zac Stendha and Sand to Faubert and Zo a with empha s on major terary movements Prereq s tes both FRE 322 and 6 hours of 300 eve French or on y nstru tor app ova

*Genera Stud es HU*

### **FRE 453 Theater of the 19th Century. (3)**

*spring*

From Romant c drama to the Symbo st Theater Repre entat ve pays of Hugo Musset V gny, Dumas, Be que Rostand Feydeau and M r beau. Prerequ s tes both FRE 322 and 6 hours of 300 eve French or on y nstructor approva

*Genera Stud es L HU*

### **FRE 461 Modern Narrative. (3)**

*fa*

Representat ve authors from G de to the new Nouveau Roman Pre requ s tes both FRE 322 and 6 hours of 300 eve French or on y nstructor approva .

*Genera Stud es HU*

### **FRE 462 Modern Poetry. (3)**

*spring*

Representat ve authors from Ma a me to Bonnefoy. Lecture d scu s on Prerequ s tes both FRE 322 and 6 hours of 300 eve Frenc or on y nstructor approva

*Genera Stud e HU*

### **FRE 471 The Literature of Francophone Afr ca and the Caribbean. (3)**

*fa*

Se e ted prose poetry and drama of b ack authors f om Af ca and the Ca bbean Prerequ s tes both FRE 322 and 6 hours of 30 eve French or o y nstructor approva

*Genera Stud e L HU*

### **FRE 472 Franco-Canadian Civilization. (3)**

*spring*

Study of the c v zat on of Quebec n part ar through ts h story an guage terature mus c and customs Prerequ te 9 hour of 300 eve French or n tructor approva

### **FRE 480 Translation Theory and Practice. (3)**

*spring*

Theoret ca and pract ca approaches to the fundamenta of mean ng based trans at on Lecture sem nar Prerequ s te FRE 412 or n truc tor approva

### **FRE 482 Business Translation. (3)**

*fa*

Pra t ca appoa h to mean ng based trans at on through exp s re to a var ety of bus ness texts Prerequ s te FRE 312 or nst uctor approva

### **FRE 485 Literary Translation. (3)**

*spring*

Theory nd pract ce of terary trans at on with empha s on app a t o thro gh nd v dua trans at n project Prerequ s te FRE 480

### **FRE 494 Special Top cs. (1-4)**

*se ected semesters*

### **FRE 499 Individualized Instruction. (1-3)**

*se ected semesters*

### **FRE 500 Bibliography and Research Methods. (3)**

*fa*

Required of a graduate st dents

### **FRE 510 Exp ication de Textes. (3)**

*se ected semesters*

Det a ed ana ys s of terary texts

### **FRE 515 Intellectual Currents in France, from the Middle Ages to the 18th Century. (3)**

*se ected semesters*

S gn f cant soc a aesthet c ph osoph c and sc ent f c deas as pre sented by ma or wr ters of f ct on and nonf ct on

### **FRE 516 Intellectual Currents in France, from the 19th Century to the 20th Century. (3)**

*se ected semesters*

See FRE 515

### **FRE 521 History of the French Language. (3)**

*spring*

Pr nc pa phono ogy ca , mo pho ogy ca , and semant c deve opments of French from Lat n t present with empha s on O d and M dd e French Prerequ s te: some fam ar ty with Lat n recommend d

### **FRE 531 Medieval French Literature. (3)**

*fa*

Read ngs the epc s ear y drama Roman courto s, and other repre sentat ve terary genres of the M dd e Ages

### **FRE 535 French L' terature of the 16th Century. (3)**

*fa*

Read ng n French Rena ssance terature with spec a attent on to the human st movement and to Rabe a s Monta gne and the Pe ade

L teracy a d r t a q ry MA themat s CS computer stat st s quantatve app cat ns HU human tes nd fne art SB s ca and behav ora cen e SG natu a e e ge era ore ouse SQ natu a science q ant tat ve C cu tu a d verty the n ted State G goba H h to a See Genera Stud e page 83

## COLLEGE OF LIBERAL ARTS AND SCIENCES

### **FRE 580 Translation Theory and Practice. (3)**

*spring*  
Theoretical and practical approaches to the fundamentals of meaning based translation. Lecture/seminar. Prerequisite: FRE 412 or instructor approval.

### **FRE 582 Business Translation. (3)**

*fall*  
Practical approach to meaning based translation through exposure to a variety of business texts. Prerequisite: FRE 312 or instructor approval.

### **FRE 585 Literary Translation. (3)**

*spring*  
Theory and practical literary translation with emphasis on application through individual translation project. Lecture/seminar. Prerequisite: FRE 480.

### **FRE 591 Seminar (1-12)**

*see elected semesters*

Topics may include the following:

- Advanced Problems in French Literature 3
- Bazac 3
- Corneille, Molière and Racine 3
- Diderot, Voltaire and Rousseau 3
- Faubert 3
- French Extensive Literature 3
- French Literary Criticism 3
- Prudhomme 3
- Realism and Naturalism
- Romanticism 3
- Stendhal and Zola 3

**Omnibus Courses.** For an explanation of courses offered but not specified in this catalog, see Omnibus Courses page 56.

## GERMAN (GER)

### **GER 101 Elementary German. (4)**

*fall, spring, summer*

Reading, writing, speaking and understanding basic German with emphasis on pronunciation and grammar. Credit allowed for only GER 101 or 111. 4 hours lecture, 1 hour lab. Fee.

### **GER 102 Elementary German. (4)**

*fall, spring, summer*

See GER 101. Credit allowed for only GER 102 or 111. Fee. Prerequisite: GER 101 or its equivalent.

### **GER 111 Fundamentals of German. (4)**

*fall and spring*

Primary for students with two years of high school German who need review to enter second year study. Credit allowed for only GER 111 or both GER 101 and 102. 4 hours lecture, 1 hour lab. Fee.

### **GER 201 Intermediate German. (4)**

*fall, spring, summer*

Intensive review of grammar with emphasis on the development of the skills of speaking, listening, comprehension, reading and writing. 4 hours lecture, 1 hour lab. Fee. Prerequisite: GER 102 or 111 or its equivalent.

*General Studies G*

### **GER 202 Intermediate German. (4)**

*fall, spring, summer*

See GER 201. Prerequisite: GER 201 or its equivalent.

*General Studies G*

### **GER 303 Scientific German. (3)**

*see elected semesters*

Acquisition of a specialized vocabulary through the reading of German scientific publications. Prerequisite: GER 202 or its equivalent.

### **GER 304 Scientific German. (3)**

*see elected semester*

See GER 303. Prerequisite: GER 202 or its equivalent.

### **GER 311 German Conversation. (3)**

*fall*

Expansion of domain through oral practice dealing with contemporary articles, essays, and stories. 3 semester hours. MIT for majors. Prerequisite: GER 202 or its equivalent.

*General Studies G*

### **GER 312 German Conversation. (3)**

*spring*

See GER 311. Prerequisite: GER 202 or its equivalent.

*General Studies G*

### **GER 313 German Composition. (3)**

*spring*

Intensive practical writing emphasizes style and grammar. Prerequisite: GER 202 or its equivalent.

*General Studies G*

### **GER 314 Introduction to German Literature. (3)**

*fall*

Beginning study of German poetry, drama, the novel, and the *Novelle*. Prerequisite: GER 202 or its equivalent.

### **GER 319 Business Correspondence and Communication. (3)**

*see elected semesters*

Organization and presentation of clear, effective business communications. Vocabulary applicable to modern business usage. Prerequisite: GER 313 or instructor approval.

*General Studies G*

### **GER 394 Special Topics. (1-4)**

*elected semesters*

### **GER 411 Advanced Grammar and Conversation. (3)**

*fall*

Improvement of dictation and dictation through intensive oral review. Prerequisite: GER 311 or 312 or its equivalent.

*General Studies G*

### **GER 412 Advanced Grammar and Composition. (3)**

*spring*

Improvement of writing ability. Prerequisite: GER 313 or its equivalent.

*General Studies G*

### **GER 415 German Civilization. (3)**

*spring*

Aspects of political, social and cultural life of the German speaking world from the beginning through 1600. Prerequisite: a 300 level course in German or instructor approval.

*General Studies HU H*

### **GER 416 German Civilization. (3)**

*fall*

From 1600 through 1945. Prerequisite: a 300 level course in German or instructor approval.

*General Studies HU H*

### **GER 421 German Literature. (3)**

*fall*

From the beginning to Classicism. Prerequisite: 6 hours of 300 level German.

*General Studies HU*

### **GER 422 German Literature. (3)**

*spring*

From Romanticism to the present. Prerequisite: 6 hours of 300 level German.

*General Studies L, HU*

### **GER 445 German Literature: Enlightenment to Classicism. (3)**

*see elected semesters*

Major works of the literary epochs in the century. Prerequisite: GER 421 or instructor approval.

### **GER 451 German Literature: Biedermeier to Naturalism. (3)**

*see elected semesters*

Representative works of prose and poetry from 1820 to 1890. Prerequisite: GER 422 or instructor approval.

### **GER 453 German Literary Masterpieces on Film. (3)**

*fall, spring, summer*

Film and literature in the correlation to each other and to cultural, political and social trends in German speaking countries. Special arrangements for graduate student and those without a knowledge of German. Lecture/discussion.

*General Studies: HU, G, H*

### **GER 461 Contemporary German Literature. (3)**

*spring and summer*

German writer since 1945. Prerequisite: GER 422 or instructor approval.

## DEPARTMENT OF LANGUAGES AND LITERATURES

### GER 494 Special Topics. (1–4)

*se ected semesters*

### GER 500 Bibliography and Research Methods. (3)

*se ected semesters*

Required of a g aduate students

### GER 511 German Stylistics. (3)

*se ected semesters*

Art of wr tng terary German c mparat ve sty st cs

### GER 521 History of German Language. (3)

*se ected semester*

L ngu st c deve opment f German from the ear e t records to the present

### GER 523 German Drama. (3)

*se ected sem st s*

Drama of the 19th and 20th ce tures

### GER 525 German Nove . (3)

*se ected semesters*

Spec a stud es n the Germ n nove

### GER 527 The *Novelle*. (3)

*se ected semester*

Spe a stud es n the German short story

### GER 531 Middle H gh German Language and L terature. (3)

*se ected semester*

Reading nd d scuss on of spec men of the M dd e H gh German ep cs romances and other terary genres

### GER 551 Romanticism. (3)

*se ected semesters*

Treatme t of ear y and ate Romant sm

### GER 555 Modern German Literature. (3)

*se ected semesters*

Major works from the per od of Express on sm t 1945

### GER 591 Seminar. (1 12)

*se ected semester*

Spec a top cs are concerned w th a f gure theme or work n German teratu e or German c stud es Top cs may ncude the fo owng

- Faust 3
- Germa c Stud e 3
- Goethe 3
- Gras and Bo 3
- Hesse 3
- Kafka 3
- Kest 3
- Sch er 3

**Omnibus Courses.** For an exp anat on of courses offered but not spec f a y sted n th s cata g see Omn bus Courses page 56

## ANCIENT GREEK (GRK)

### GRK 101 Elementary Ancient Greek (4)

*fa*

Anc ent Greek grammar and v cabu ary w th an emphasis on deve op ng read ng sk s For beg nn ng students on y

### GRK 201 Intermed ate Ancient Greek. (4)

*spr ng*

Cont n at on of GRK 101 ncreased emphasis on read ng texts adapted from Ar stophanes Demosthenes, and P ato Prerequ st e GRK 101 or nstructor approv

### GRK 301 Ancient Greek L terature. (3)

*fa*

Readngs n the masterp e es of anc ent Greek terature advanced grammar Aut ors read are ch nged each year n accordance w th the needs of the c ass May be repeated for c edt Prerequ st e GRK 2 1 or nstructor approva .

*Genera l Stud es HU*

### GRK 302 Ancient Greek L terature. (3)

*spr ng*

Cont nuat on f GRK 301 Prerequ st e GRK 201 or nstru tor approva

*Genera l Stud es H*

**Omnibus Courses.** For an exp anat on of courses offered but not spec f a y sted n th s cata og, ee Omn bus Cour es page 56

## HEBREW (HEB)

### HEB 101 Elementary Modern Hebrew. (4)

*fa*

Reading wr tng speak g and under land ng of bas c modern Hebrew w th emphasis on pronun at on and grammar 4 hour e c ture 1 hour ab Fee

### HEB 102 Elementary Modern Hebrew. (4)

*p g*

Reading wr tng speak ng, and unde stand g of bas c modern Hebrew w th emphasis n pronun at on and grammar 4 ho r e c ture 1 hour ab Fee Prerequ st e HEB 101 o ts equ va ent

### HEB 201 Intermediate Modern Hebrew. (4)

*fa*

te s ve rev ew of grammar w th emphasis on the deve opment of the k s of peak ng ten ng comprehen on read ng and wr tng 4 hours ecture, 1 hour ab Fee Prerequ st e HEB 102 or ts equ va ent

*Genera l Stud es G*

### HEB 202 Intermediate Modern Hebrew. (4)

*spr ng*

Inte s ve rev ew of grammar w th emphasis on the deve opment of the k s f peak ng sten ng comprehen on read ng and wr tng 4 hours ecture 1 hour ab Fee Prerequ te HEB 201 r ts equ va ent

*Genera l Stud es G*

### HEB 313 Advanced Modern Hebrew. (4)

*fa*

Cont nued deve opment of ab ty to commun cate ora y and n wr tng. Reading of se ected tera y wo ks Prerequ st e HEB 202 or ts equ va ent

### HEB 314 Advanced Modern Hebrew. (4)

*spr ng*

Cont nued deve opment of ab ty to comm n ate ora y and n wr tng Reading of se ected terary work Prerequ st e HEB 313 or ts equ va ent

### HEB 375 Contemporary Culture of Israe . (3)

*fa and spr ng*

te e tudy of aspects of h stor ca soc a po t ca and cu tura modern fe n Israe Beg nn ng of Z n sm t present day Le ture d s cuss on

*Genera l Stud es HU, G*

**Omnibus Courses.** For an exp anat on of courses offered but not spec f a y sted n th s cata og see Omn bu Courses page 56

## INDONESIAN (IDN)

### IDN 101 Elementary Indonesian I. (5)

*fa*

Bas c commun cat on read ng and wr tng sk s ntens ve ora au a c a sroom dr supp emented by prose read g 4 hours ecture 1 hour ab Fee

### IDN 102 Elementary Indonesian II. (5)

*spr ng*

Ba c ommun cat on read ng and wr tng sk s nten ve ra aura c assroom dr supp emented by prose read ng 4 h urs ecture 1 h ur ab Fee Prerequ st e DN 101 or ts equ va ent

### IDN 201 Intermed ate Indonesian I. (5)

*fa*

Systemat c rev ew of grammar C nt nued deve opment of commun cat on k s w th ncreased emphasis on read ng and wr tng 4 hour ecture 1 hour ab Fee Prerequ st e DN 102 or ts equ va ent

*Genera l Stud es G*

L teracy and rt a nq ry MA mathe at c CS co puter tat t c quantat ve app cat o s HU u ante n fne art SB c and e avora e e SG at en e g nera core cou s SQ natura e e u nt t ve C t ra d er ty n t e U ted State G b H hst a See Ge e a tud page

## COLLEGE OF LIBERAL ARTS AND SCIENCES

### IDN 202 Intermediate Indonesian II. (5)

*spring*

Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing. 4 hours lecture 1 hour lab Fee Prerequisite: DN 201. Its equivalent: *General Studies G*

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog, see Omnibus Course page 56

### ITALIAN (ITA)

#### ITA 101 Elementary Italian. (5)

*fall/spring/summer*

Aural/oral/dramatic and laboratory Basic grammar supplemented by sample prose readings. 5 hours lecture 1 hour lab Fee

#### ITA 102 Elementary Italian (5)

*fall/spring/summer*

Aural/oral/dramatic and laboratory Basic grammar supplemented by sample prose readings. 5 hours lecture 1 hour lab Fee Prerequisite: ITA 101 or its equivalent

#### ITA 201 Intermediate Italian. (3)

*fall and spring*

Systematic review of grammar. Development of vocabulary through reading, listening, speaking and writing. 3 hours lecture, 1 hour lab Fee Prerequisite: A 1 2 or its equivalent. *General Studies G*

#### ITA 202 Intermediate Italian. (3)

*fall and spring*

Systematic review of grammar. Development of vocabulary through reading, listening, speaking and writing. 3 hours lecture 1 hour lab Fee Prerequisite: ITA 201 or its equivalent. *General Studies G*

#### ITA 311 Italian Composition and Conversation. (3)

*fall and spring*

Development of writing ability and oral expression. Prerequisite: ITA 202. Its equivalent. *General Studies G*

#### ITA 312 Italian Composition and Conversation. (3)

*fall and spring*

See ITA 311. Prerequisite: ITA 2 2. Its equivalent. *General Studies G*

#### ITA 314 Advanced Italian. (3)

*selected semesters*

Advanced grammar and composition with readings of selected literary works. Prerequisite: ITA 202 or instructor approval. *General Studies G*

#### ITA 325 Introduction to Italian Literature. (3)

*fall*

Italian literature through the interpretation of representative works in drama, poetry and novel. Prerequisite: ITA 2 2 or instructor approval. *General Studies HU*

#### ITA 394 Special Topics. (1-4)

*selected semesters*

Topics may include the following:  
• Commercial Law 3

#### ITA 415 Italian Civilization. (3)

*selected semesters*

General survey of history, literature and music emphasizing Italy's contribution to Western civilization. Prerequisites: ITA 311, 312 or 314. *General Studies L HU G*

#### ITA 420 Italian Cinema. (3)

*fall*

Major trends of Italian cinema from the post-war period to the present

#### ITA 425 Italian American Culture. (3)

*spring*

A survey representation of Italian American history and culture in several media including literature, film and television. Lecture/discussion. *General Studies G*

#### ITA 430 Italian Literature of the Middle Ages. (3)

*selected semesters*

Emphasizes St. Nov., Dante's minor works, Petrarch and Boccaccio. Prerequisite: ITA 325 or instructor approval. *General Studies H*

#### ITA 441 Dante: *Divina Commedia*. (3)

*selected semesters*

Critical reading of the entire *Cantica Inferno Purgatorio and Paradiso*. Prerequisite: ITA 325. *General Studies HU*

#### ITA 443 Italian Literature of the Renaissance. (3)

*selected semesters*

Emphasizes Lorenzo de' Medici, Poliziano, Castiglione, Machiavelli, Ariosto and Tasso. Prerequisite: ITA 325. Instructor approval. *General Studies HU H*

#### ITA 446 Italian Literature of the 18th and 19th Centuries. (3)

*selected semesters*

Goldoni, Parini, Alfieri, the poetry of Foscolo and Leopardi and the 18th-century novels of Fielding, Marryat and Verne. Prerequisite: ITA 3 5 or instructor approval. *General Studies H*

#### ITA 449 20th Century Italian Literature. (3)

*selected semesters*

Major works figures and movements of contemporary Italian literature. Prerequisite: A 325. *General Studies U G*

#### ITA 494 Special Topics. (1-4)

*selected semesters*

Topics may include the following:  
• Italian American Culture 3

#### ITA 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 56

### JAPANESE (JPN)

#### JPN 101 First-Year Japanese I. (5)

*fall*

Communication skills and basic skills in grammar, reading and writing. Includes reading hiragana, katakana and about 75 kanji. 5 hours per week. Fee

#### JPN 102 First-Year Japanese II. (5)

*spring*

Continuation of JPN 101. Additional 99 kanji. Continued development of communication skills, speaking, listening, reading, writing and culture. Fee Prerequisite: JPN 101 or its equivalent

#### JPN 201 Second-Year Japanese I. (5)

*fall*

Continued development of communication skills with increased emphasis on reading and writing. Review of fundamentals of structure to increase ability in composition and translation. 5 hours per week. Fee Prerequisite: JPN 1 2 or its equivalent. *General Studies G*

#### JPN 202 Second-Year Japanese II. (5)

*spring*

Continuation of JPN 201. Fee Prerequisite: JPN 201 or its equivalent. *General Studies G*

#### JPN 206 Calligraphy. (1)

*selected semesters*

Introduces the practice of calligraphy in Japan with emphasis on the derivation of Japanese kana symbols from Chinese characters. Prerequisite: CH 205 or JPN 101

#### JPN 309 Intermediate Japanese Conversation. (2)

*fall*

Practical current usage in exercises on dialogue. Recommended especially for those who have not had the opportunity to practice Japanese in Japan. Prerequisite: JPN 202

#### JPN 310 Intermediate Japanese Conversation. (2)

*spring*

Continuation of JPN 309. Prerequisite: JPN 3 9

## DEPARTMENT OF LANGUAGES AND LITERATURES

### JPN 311 Japanese Conversation and Composition. (3)

*fa*  
Intensive oral practice leading toward conversational fluency. Practice in writing Japanese emphasizing current usage. Prerequisite JPN 202  
*General Studies G*

### JPN 312 Japanese Conversation and Composition. (3)

*spring*  
See JPN 311 Prerequisite JPN 202  
*General Studies G*

### JPN 313 Third-Year Japanese I. (3)

*fa*  
Continued development of basic skills with greater emphasis on reading. JPN 313 and 314 must be taken in sequence. Prerequisite JPN 202 or its equivalent  
*General Studies G*

### JPN 314 Third-Year Japanese II (3)

*spring*  
Continued development of basic skills with continued emphasis on reading. JPN 313 and 314 must be taken in sequence. Prerequisite JPN 313 or instructor approval  
*General Studies G*

### JPN 321 Japanese Literature. (3)

*selected semesters*  
Readings in modern literature changing yearly. May be repeated for credit. Prerequisite JPN 313 or 314 or instructor approval  
*General Studies L.H.U. G*

### JPN 394 Special Topics. (1-4)

*selected semesters*

### JPN 414 Introduction to Classical Japanese. (3)

*spring*  
Readings from various genres of pre-20th century literature with analysis of the structure of the classical age. Prerequisite JPN 313 or instructor approval

### JPN 435 Advanced Readings. (3)

*selected semesters*  
Readings in history, art, religion, studies, economics, or other fields. Lecture/discussion. Prerequisite JPN 314 or its equivalent

### JPN 485 Problems of Translation. (3)

*selected semesters*  
Theories and practice of translation, strategies for handling a variety of Japanese texts. Lecture/discussion. Prerequisite JPN 314 or its equivalent

### JPN 494 Special Topics. (1-4)

*selected semesters*

### JPN 499 Individualized Instruction. (1-3)

*selected semesters*

### JPN 500 Bibliography and Research Methods. (3)

*selected semesters*  
Introduces research materials on Japan both in Japanese and in Western languages. Overview of research methods. Lecture/discussion

### JPN 514 Advanced Premodern Japanese. (3)

*selected semesters*  
Close readings of selected premodern texts, with focus on grammar and stylistic features. Lecture/discussion. Prerequisite JPN 414 or its equivalent

### JPN 520 Teaching of Japanese as a Second Language. (3)

*selected semesters*  
Theory and practice of teaching Japanese including presentation, interaction, and evaluation with consideration given to cultural factors. Lecture/discussion.

### JPN 535 Advanced Readings. (3)

*selected semesters*  
Readings in primary and secondary sources in history, art, religion, studies, literature, or other fields. Lecture/discussion. Prerequisite JPN 414 or its equivalent

### JPN 543 Japanese Language and Linguistics. (3)

*selected semesters*  
Analysis and discussion of linguistic theory applied to Japanese phonology, morphology, and syntax including psycholinguistics and sociolinguistics and sociolinguistics

### JPN 585 Advanced Problems of Translation. (3)

*selected semesters*  
Theories and practice of translation, strategies for handling a variety of Japanese texts. Lecture/discussion. Prerequisite JPN 435 or its equivalent

### JPN 591 Seminar. (3)

*selected semesters*  
Topics in literary, linguistic, or cultural studies

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog, see Omnibus Courses page 56

## KOREAN (KOR)

### KOR 101 First-Year Korean I. (5)

*fa*  
Pronunciation, grammar, elementary conversation, and development of basic reading and writing skills including Hangeul. Lecture/reading/recitation

### KOR 102 First-Year Korean II. (5)

*spring*  
Continuation of KOR 101. Lecture/recitation. Prerequisite KOR 101 or its equivalent

### KOR 201 Second-Year Korean I. (5)

*fa*  
Continued development of communication skills, increased emphasis on reading and writing vocabulary building, and review of fundamentals. Lecture/recitation. Prerequisite KOR 102 or its equivalent  
*General Studies G*

### KOR 202 Second-Year Korean II. (5)

*spring*  
Continuation of KOR 201. Lecture/recitation. Prerequisite KOR 201 or its equivalent  
*General Studies G*

### KOR 250 Korean Culture and Society. (3)

*once a year*  
Survey of Korean culture and society covering history, religious traditions, gender, and popular culture. Lecture/discussion  
*General Studies G*

### KOR 313 Third-Year Korean I. (3)

*fa*  
Continued development of ability to communicate orally and in writing. Exposure to a variety of Korean written styles. Reading/writing/discussion. Prerequisite KOR 202 or its equivalent

### KOR 314 Third-Year Korean II. (5)

*spring*  
Continuation of KOR 313. Reading/writing, discussion. Prerequisite KOR 313 or its equivalent

### KOR 347 Korean Film and Literature. (3)

*fa*  
Introduces aspects of Korean history, culture, and society through Korean film and literature. Lecture/discussion

### KOR 350 Women of Korea. (3)

*spring*  
Examines the changing role and status of women in modern Korea in relation to political and cultural changes. Lecture/discussion

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog, see Omnibus Courses page 56

## LATIN (LAT)

### LAT 101 Elementary Latin. (4)

*fa and spring*  
Basic Latin grammar with emphasis on developing reading skills. For beginning students only

### LAT 102 Elementary Latin. (4)

*fa and spring*  
Continuation of LAT 101. Prerequisite LAT 101 or its equivalent

L: terra y a d c t a n q r y MA: mathematic CS: computer statistics quantitative app at HU: h a t e and f e a t s SB: s c a and behavior e SG: natura e—general references SQ: natural science equ it t v C: cutu a d v e r t y n t h e n t e d States G: g o b a H h t a See General Studies page 83

## COLLEGE OF LIBERAL ARTS AND SCIENCES

### LAT 201 Intermediate Latin. (4)

*fall*  
Selected Latin literature both classical and postclassical, Vergil's *Aeneid* advanced grammar Prerequisite: LAT 102 or instructor approval  
*General Studies HU*

### LAT 202 Intermediate Latin. (4)

*spring*  
Continuation of LAT 201. Students entering LAT 202 directly from LAT 102 must complete LAT 201 to satisfy the College of Liberal Arts and Science secondary language requirement Prerequisite: LAT 201 or instructor approval  
*General Studies HU*

### LAT 421 Roman Literature. (3)

*fall*  
Readings in the Latin masterpieces. Author read, handled each year according to needs of the class. May be repeated for credit.  
Prerequisite: LAT 202 or instructor approval  
*General Studies HU*

### LAT 422 Roman Literature. (3)

*spring*  
See LAT 421 Prerequisite: LAT 202 or instructor approval  
*General Studies HU*

**Omnibus Courses.** For an examination of course offered but not specifically listed in this catalog see Omnibus Courses page 56

## NORWEGIAN (NOR)

### NOR 101 Elementary Norwegian. (4)

*fall*  
Reading, writing, speaking and understanding of basic Norwegian. 4 hours lecture 1 hour lab Fee

### NOR 102 Elementary Norwegian. (4)

*spring*  
Reading, writing, speaking and understanding of basic Norwegian. 4 hours lecture 1 hour lab Fee Prerequisite: NOR 101 or its equivalent

### NOR 201 Intermediate Norwegian. (4)

*fall*  
Reviews Norwegian grammar with emphasis on the development of the skills of speaking, listening, comprehension, reading and writing. 4 hours lecture 1 hour lab Fee Prerequisite: NOR 102 or its equivalent

### NOR 202 Intermediate Norwegian. (4)

*spring*  
Reviews Norwegian grammar with emphasis on the development of the skills of speaking, listening, comprehension, reading and writing. 4 hours lecture 1 hour lab Fee Prerequisite: NOR 201 or its equivalent

**Omnibus Courses.** For an examination of courses offered but not specifically listed in this catalog see Omnibus Courses page 56

## PORTUGUESE (POR)

### POR 101 Elementary Portuguese. (5)

*fall*  
Basic grammar with intensive drills in class and laboratory directed toward conversational fluency. 5 hours lecture 1 hour lab Fee Prerequisite: 1 year of Spanish or French or teacher or instructor approval

### POR 201 Intermediate Portuguese. (5)

*spring*  
Continuation of POR 101. Intensive drills of fundamental sentence class and laboratory directed toward conversational fluency. 5 hours lecture 1 hour lab Fee Prerequisite: POR 101 or instructor approval  
*General Studies G*

### POR 313 Portuguese Composition and Conversation. (3)

*fall*  
Develop skills in written Portuguese and corrected oral expression. Must be taken in sequence. Prerequisite: POR 201 or instructor approval  
*General Studies G*

### POR 314 Portuguese Composition and Conversation. (3)

*spring*  
Continuation of POR 313. Prerequisite: POR 313 or instructor approval  
*General Studies G*

### POR 321 Luso-Brazilian Literature. (3)

*selected semesters*  
Representative masterpieces of Portuguese and Brazilian literature from the beginning to the present. Prerequisite: POR 313 or instructor approval  
*General Studies HU*

### POR 472 Luso-Brazilian Civilization. (3)

*selected semesters*  
Lectures, readings and discussion of important aspects of Luso-Brazilian civilization. Topics from music, art, folklore, literature, history and politics. Prerequisite: POR 313 or instructor approval  
*General Studies HU G*

**Omnibus Courses.** For an examination of courses offered but not specifically listed in this catalog see Omnibus Courses page 56

## ROMANIAN (ROM)

### ROM 101 Elementary Romanian. (5)

*fall*  
Basic grammar with intensive drills in class and laboratory directed toward conversational fluency. 5 hours lecture 1 hour lab.

### ROM 201 Intermediate Romanian. (5)

*fall*  
Continuation of ROM 101. Intensive drills of fundamental sentence class and laboratory directed toward conversational fluency. 5 hours lecture 1 hour lab Prerequisite: ROM 101 or instructor approval

### ROM 313 Romanian Composition and Conversation. (3)

*spring*  
Develops skills in written Romanian and corrected oral expression. Must be taken in sequence with ROM 314. Prerequisite: ROM 201 or instructor approval

### ROM 314 Romanian Composition and Conversation. (3)

*spring*  
Continuation of ROM 313. Develops skills in written Romanian and corrected oral expression. Must be taken in sequence. Prerequisite: ROM 313 or instructor approval

### ROM 494 Special Topics. (1-4)

*once a year*

**Omnibus Courses.** For an examination of courses offered but not specifically listed in this catalog see Omnibus Courses page 56

## RUSSIAN (RUS)

### RUS 101 Elementary Russian. (4)

*fall, spring, summer*  
Structural grammar and basic vocabulary introduced and reinforced.aural, oral reading and writing skills. 4 hours lecture 1 hour lab Fee

### RUS 102 Elementary Russian. (4)

*spring and summer*  
See RUS 101. Fee Prerequisite: RUS 101 or its equivalent

### RUS 201 Intermediate Russian. (4)

*fall and summer*  
Systematic review of grammar. Develops vocabulary through reading and writing. Drills in oral skills. 4 hours lecture 1 hour lab Fee Prerequisite: RUS 102 or its equivalent  
*General Studies G*

### RUS 202 Intermediate Russian. (4)

*spring and summer*  
See RUS 201. Fee Prerequisite: RUS 201 or its equivalent  
*General Studies G*

### RUS 211 Basic Russian Conversation. (3)

*fall*  
Intensive oral drills to supplement reading and grammatical skills acquired in RUS 101, 201 and 202. Required of Russian majors. Fee Prerequisite: RUS 102  
*General Studies G*

## DEPARTMENT OF LANGUAGES AND LITERATURES

### **RUS 212 Basic Russian Conversation. (3)**

*spring*

See RUS 211 Fee Prerequisite RUS 102

*General Studies G*

### **RUS 303 Scientific Russian. (3)**

*fall*

Acquisition of scientific vocabulary through reading from current Russian scientific publications. Does not satisfy the Liberal Arts and Sciences language requirement for B.A. degree. Prerequisite RUS 102.

### **RUS 304 Scientific Russian. (3)**

*spring*

See RUS 303 Prerequisite RUS 102.

### **RUS 311 Russian Composition and Conversation. (3)**

*fall*

Develops writing ability and oral expression. Prerequisite RUS 202

*General Studies G*

### **RUS 312 Russian Composition and Conversation. (3)**

*spring*

See RUS 311 Prerequisite RUS 202

*General Studies G*

### **RUS 321 Survey of Russian Literature. (3)**

*once a year*

Main literary movements, authors and significant work of prose, poetry, and drama from the beginning to the mid 19th century in translation. Prerequisite RUS 202 or its equivalent.

*General Studies HU H*

### **RUS 322 Survey of Russian Literature. (3)**

*once a year*

Insight into the 19th and early 20th century Russian thought and culture by reading translations of works of major writers. Prerequisite RUS 202 or its equivalent.

*General Studies LHU*

### **RUS 323 Survey of Literature of the Soviet Era. (3)**

*once a year*

Main literary movements from notable authors and the most significant works of prose, poetry, and drama of the Soviet period from 1917-1991. Prerequisite RUS 202 or its equivalent.

*General Studies L/HU G*

### **RUS 411 Advanced Composition and Conversation I. (3)**

*fall*

Improves oral and written expression and self-expression in oral and written skills. Emphasizing vocabulary building. Subject material drawn from current post-Soviet Russian publications. Prerequisite RUS 312

*General Studies G*

### **RUS 412 Advanced Composition and Conversation II. (3)**

*spring*

See RUS 411. Prerequisite RUS 312

*General Studies G*

### **RUS 417 Applied Russian Phonetics. (2)**

*seceded semesters*

General improvement in language skills through oral and written Russian phonology and analysis of Russian orthography. Prerequisite RUS 102

### **RUS 420 Russian Poetry. (3)**

*seceded semesters*

Development of Russian poetry from its beginnings to the present including both native and emigrant poets. Topics in criticism and the study of poets. Prerequisite RUS 312 or instructor approval

*General Studies L/HU*

### **RUS 421 Pushkin. (3)**

*seceded semesters*

Pushkin's poetry, plays and prose fiction, including *Eugene Onegin*, *The Little Tragedies*, *Tales of Bechinn*, *Queen of Spades*, and *The Captain's Daughter*. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for B.A. degree

*General Studies L/HU*

### **RUS 423 Dostoyevsky. (3)**

*seceded semesters*

Dostoyevsky's major works of fiction including *Crime and Punishment* and *Brothers Karamazov*. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for B.A. degree

*General Studies L/HU*

### **RUS 424 Tolstoy. (3)**

*seceded semesters*

Two of his major works including *War and Peace* and *Anna Karenina*. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for B.A. degree

*General Studies L/HU*

### **RUS 425 Chekhov. (3)**

*seceded semesters*

Chekhov's major works representative of short stories and major plays including *The Cherry Orchard* and *Three Sisters*. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for B.A. degree

*General Studies L/HU*

### **RUS 426 Literatures of the Nationalities of the Former Soviet Union. (3)**

*seceded semester*

Includes such authors as Belevca, Kross, Venkova, Kupala, Kovylov, Sevak, Nasimov, Charents, Chopan. Prerequisite RUS 312 or instructor approval

*General Studies L/HU G*

### **RUS 430 Russian Short Story. (3)**

*seceded semester*

Detailed study of representative works of the Russian short story genre. Includes authors from both Imperial and Soviet Russia. Prerequisite RUS 312 or instructor approval

*General Studies L/H*

### **RUS 440 History of the Russian Language. (3)**

*seceded semester*

Principles of historical linguistics presented through the evolution of the Russian language from proto-Indo-European to the present. Readings of historical documents in Old Russian and Old Church Slavonic. Prerequisite RUS 312 or instructor approval

### **RUS 441 Survey of Russian Culture. (3)**

*seceded semesters*

Interplay of artistic, social and political forces in the development of Russian culture from the Kievan period to the present. Exclusive use of Russian language source material. Prerequisite RUS 312 or instructor approval.

*General Studies L/HU G H*

### **RUS 494 Special Topics. (1-4)**

*seceded semesters*

### **RUS 499 Individualized Instruction. (1-3)**

*seceded semesters*

### **RUS 591 Seminar. (3)**

*seceded semesters*

Topics in literary, linguistic, or other cultural studies

**Omnibus Courses.** For an explanation of courses offered but not specified, see the catalog. See Omnibus Courses, page 56

## SCANDINAVIAN (SCA)

### **SCA 250 Introduction to Scandinavian Culture. (3)**

*spring*

Scandinavian identity from an interdisciplinary perspective with historical overview. Lecture/discussion

*General Studies HU G H*

### **SCA 314 Med'eva Scandnavia. (3)**

*fall and spring*

Study in English translation of the Sagas, Edda, and Skaldic poetry

history and mythology of the Vikings

### **SCA 315 Old Norse (3)**

*fall and spring*

Readings and study of grammatical structure of Med'eva Scandinavian with emphasis on the sagas and Edda poetry and historical writings

L: language and linguistics MA: mathematics CS: computer statistics qualitative approach HU: humanities and fine arts SB: social behavior science SG: student engagement and recreation SQ: natural science quantitative CI: diversity in the United States G: global history See General Studies page 8

## COLLEGE OF LIBERAL ARTS AND SCIENCES

### SCA 316 Scandinavian Cinema. (3)

*fa and spring*

Presents Scandinavian films with English subtitles as representative of contemporary and historical culture

*General Studies HU G*

### SCA 450 Masterpieces of Scandinavian Literature (3)

*spring*

Scandinavian literature in translation in its cultural and historical contexts

*General Studies L/HU*

**Omnibus Courses.** For an explanation of courses offered but not specified in this catalog see Omnibus Courses page 56

## SPANISH (SPA)

**SPA Note 1.** Students who have completed the secondary education in a school where Spanish was the official language of instruction should begin the studies at the 325 level or above. No student who has completed more than two years of high school in a Spanish speaking country where Spanish is the medium of instruction in the school should be registered in a Spanish language class below the 400 level.

### SPA 101 Elementary Spanish. (4)

*fa spring summer*

Fundamentals of the language. Emphasizes listening speaking reading, and writing. Credits awarded for only SPA 101. 4 hours lecture, 1 hour lab. Fee. See SPA Note 1.

### SPA 102 Elementary Spanish. (4)

*fa spring summer*

See SPA 101. Credits awarded for only SPA 102 or 111. Fee. See SPA Note 1. Prerequisite: SPA 101 or its equivalent.

### SPA 107 Spanish for International Professions I. (8)

*fa*

Accelerated program alternative to SPA 101-102 sequence. Functional approach to needs of international professions. Fee. See SPA Note 1.

### SPA 111 Fundamentals of Spanish. (4)

*fa and spring*

Prerequisite for students with two years of high school Spanish who need review to enter second year study. Credits awarded for only SPA 111 or both SPA 101 and 102. 4 hours lecture, 1 hour lab. Fee. See SPA Note 1.

### SPA 201 Intermediate Spanish. (4)

*fa spring summer*

Continuation of fundamentals. Emphasizes the development of the skills of reading listening comprehension speaking writing and culture. 4 hours lecture, 1 hour lab. Fee. See SPA Note 1. Prerequisite: SPA 102 or 111.

*General Studies G*

### SPA 202 Intermediate Spanish. (4)

*fa spring summer*

See SPA 201. Fee. See SPA Note 1. Prerequisite: SPA 201 or its equivalent.

*General Studies G*

### SPA 203 Intermediate Spanish for Bilinguals. (4)

*fa*

For Spanish speaking students in lieu of SPA 201. Composition literature conversation grammar fundamentals. 4 hours lecture, 1 hour lab. Fee. See SPA Note 1. Prerequisite: SPA 102 or 111 or placement examination.

*General Studies G*

### SPA 204 Intermediate Spanish for Bilinguals. (4)

*spring*

For Spanish speaking students in lieu of SPA 202. Composition literature conversation grammar fundamentals. 4 hours lecture, 1 hour lab. See SPA Note 1. Prerequisite: SPA 203 or its equivalent.

*General Studies G*

### SPA 207 Spanish for International Professions II. (8)

*spring*

Continuation of SPA 107, alternative to SPA 201-202 sequence. Expansion of communication proficiency in specific areas of international professions. Fee. See SPA Note 1. Prerequisite: SPA 107 or instructor approval.

*General Studies G*

### SPA 311 Spanish Conversation. (3)

*fa and spring*

Designed primarily for nonmajors to promote vocabulary building and communication expression in Spanish through discussions based on current reading. See SPA Note 1. Prerequisite: SPA 202 or its equivalent.

### SPA 312 Spanish Conversation. (3)

*fa and spring*

See SPA 311. See SPA Note 1. Prerequisite: SPA 311 or its equivalent.

### SPA 313 Spanish Conversation and Composition. (3)

*fa spring summer*

Designed to develop skill and accuracy in spoken and written Spanish. Required of majors. SPA 313 and 314 must be taken in sequence. See SPA Note 1. Prerequisite: SPA 202 or its equivalent.

*General Studies G*

### SPA 314 Spanish Conversation and Composition. (3)

*fa spring summer*

See SPA 313. See SPA Note 1. Prerequisite: SPA 313 or its equivalent.

*General Studies G*

### SPA 315 Spanish Conversation and Composition for Bilinguals. (3)

*fa*

Emphasizes comparing standard Spanish with regional Southwest Spanish. May be taken in lieu of SPA 313 and 314. See SPA Note 1. Prerequisite: SPA 202 or 204 or instructor approval.

### SPA 316 Spanish Conversation and Composition for Bilinguals. (3)

*spring*

See SPA 315. See SPA Note 1. Prerequisite: SPA 315 or its equivalent.

### SPA 319 Business Correspondence and Communication. (3)

*selected semesters*

Organization and presentation of clear effective business communication. Vocabulary applicable to modern business usage. See SPA Note 1. Prerequisite: SPA 314 or 316 or instructor approval.

*General Studies G*

### SPA 325 Introduction to Hispanic Literature. (3)

*fa and spring*

Critical approach to and analysis of literary types including poetry drama short story and novel. Required of a major. See SPA Note 1.

Prerequisite: SPA 313.

*General Studies HU*

### SPA 400 Introduction to Spanish Linguistics. (3)

*fa*

Introduces the discipline and methods of linguistic through the study of Spanish data. Prerequisite: SPA 412 or its equivalent.

### SPA 412 Advanced Conversation and Composition. (3)

*fa and spring*

Oral and written Spanish communication skills with particular attention given to developing fluency and facility. Required of major. Prerequisite: SPA 314 or 316 or instructor approval.

*General Studies G*

### SPA 413 Advanced Spanish Grammar. (3)

*fa*

Intensive analysis of the Spanish language. Required of teachers and majors. Prerequisite: SPA 314 or 316 or instructor approval.

*General Studies G*

### SPA 417 Spanish Phonetics and Phonology. (3)

*fa*

Introduces the theory and practice of Spanish phonetics and phonology. Prerequisite: SPA 412.

## DEPARTMENT OF LANGUAGES AND LITERATURES

### **SPA 420 Applied Spanish Linguistics. (3)**

*spr ng*

App es ngu st c pr nc p es to the tea h ng of Span sh Prerequ s tes

FLA 400 or ts equ va ent SPA 412

*Genera Stud es L*

### **SPA 421 Spanish in the Southwest. (3)**

*fa*

D scuss on and ngu st c ana ys s of Southwest Span sh Prerequ s te

SPA 412

*Genera Stud es L SB C*

### **SPA 425 Spanish Literature. (3)**

*fa and spr ng*

Surveys Span sh terature from ts beg nn ng t 1700 Prerequ s te

SPA 325

*Genera Stud es HU*

### **SPA 426 Spanish Literature. (3)**

*fa and spr ng*

Surveys Spa sh terature from 1700 to the present Prerequ s te

SPA 325

*Genera Stud es HU*

### **SPA 427 Spanish American Literature. (3)**

*fa and spr ng*

Surveys ma or work f gures, and movements from Co on a per od to

1880 Prerequ s te SPA 325

*Genera Stud es L*

### **SPA 428 Spanish American Literature. (3)**

*fa and spr ng*

Surveys ma r works f gures, a d movements from 1880 to the

present Prerequ s te SPA 325

*Genera Stud es L G*

### **SPA 429 Mexican Literature. (3)**

*se ected semesters*

Se ected read ngs from pre Co umb an wr ters poets e g Macu xo

cht through the nove of the Revo ut on to t e present Prerequ s te

SPA 325

### **SPA 434 Drama of the Golden Age. (3)**

*spr ng*

Dramat c works of Lope de Vega, Ca deron de a Barca and the r con

temporales Prerequ s te SPA 325

### **SPA 435 Cervantes—*Don Quijote*. (3)**

*fa*

*Don Qu ote* and the deve opment of the nove Prerequ s te SPA 325

### **SPA 454 19th-Century Spanish American Narrative. (3)**

*fa*

Pr nc pa works n the nove short story narrat ve f ct on and narrat ve

Gauchesque poetry Prerequ s te SPA 325

### **SPA 456 20th-Century Spanish American Fict'on. (3)**

*spr ng*

Major works and movements Prerequ s te SPA 325

### **SPA 464 Mexican American Literature. (3)**

*fa*

Representat ve terature n Span sh and Eng sh by Mex can Amer

cans emphas z ng soc ocu tura as we as terary va ues Prerequ

s te SPA 325

*Genera Stud es HU*

### **SPA 471 Civil'zation of the Spanish Southwest. (3)**

*spr ng*

Po f ca nte ectua soc a econom c, and art st c deve opment of the

Span sh speak ng peop e of the Southwest Prerequ s te SPA 314 or

316 or nstructor approva

*Genera Stud es HU*

### **SPA 472 Spanish American Civ lization. (3)**

*fa*

Growth of the nst tut ons and cu tures of Span sh Amer can peop e

Prerequ s te SPA 314 or 316 or nstructor approva

*Genera Stud es. HU G H*

### **SPA 473 Spanish Civilization. (3)**

*sp ng*

Po f ca nte ectua soc a econom c and art st c deve opment of the

Span sh nat on from ts or gn to the present Prerequ s te SPA 314 or

316 o nstructor approva

*Genera Stud es HU SB, G*

### **SPA 485 Mexican American Short Story. (3)**

*se ected semesters*

Cr t ca study of contemporary short stor es by Mex can Amer can

aut ors with emphasis on the r Span sh language wr t ngs Prerequ

s te SPA 325 or nstructor approva

*Genera Stud es L*

### **SPA 486 Mexican American Novel. (3)**

*se ected semester*

S ca and terary contexts of representat ve nove sts emphas z ng

the r Span sh language wr t ngs Prerequ s te SPA 325 or nstr ctor

approva

### **SPA 487 Mexican American Drama. (3)**

*se ected semesters*

Rep esentat ve dramat works w th emphasis on the h story and

deve opment of th s genre from ts reg ona or gn to the present Pre

req s te SPA 325 or nstructor approva

### **SPA 494 Spec'al Topics (1–4)**

*s ect d semester*

op cs may include the fo ow ng

- ntr oduct on t H span c L ngu st cs 3

- Lex cography 3

### **SPA 500 Bibliography and Research Methods. (3)**

*fa*

Requ red of a graduate students

### **SPA 536 Generation of 1898. (3)**

*se ected semesters*

Works of nam no Baroja Az n and the r contemporaries stud ed

aga nst the deo g ca background of the turn of century n Spa n

Prerequ te SPA 325

### **SPA 540 History of the Spanish Language. (3)**

*spr ng*

Ana yzes and d scusses the deve opment of Span sh from Vu gar Lat n

to the present day Prerequ s te FLA 400 or ts equ va ent

### **SPA 541 Spanish Language in America. (3)**

*fa*

D usses and ana yzes var ous reg ona and so a var etes of Span

sh n the Amer cas Prerequ s te FLA 400 or ts equ va ent

### **SPA 542 Stud es in the Spanish of the Southwest. (3)**

*spr ng*

Exam nes b ngua m and the so a and reg ona d a cts of Span sh

n the Southwest Prerequ s te FLA 400 or ts equ va ent

### **SPA 543 Structure of Spanish. (3)**

*spr ng*

Ana yzes and d scusses data on se e ted top s n Span sh morpho

ogy semant cs and syntax Pre equ s te FLA 400 or ts equ va e t

### **SPA 544 Spanish Phonology. (3)**

*spr ng*

Surveys prob ems of Span sh phono gy w th n the context of recent

phono g ca the ry Prerequ s te FLA 400 or ts equ va ent

### **SPA 545 Concepts of Literary Criticism. (3)**

*spr ng*

A ms and methods of modern terary scho arsh p D cu es major

theor es of terary ana ys s

### **SPA 555 Spanish American Modernism. (3)**

*se ected semesters*

Pr nc pa wo ks and f gures of terary modern sm 1880 1920 w th

emphas s on nternat ona terary ontext of the movement Prerequ

s te SPA 325.

### **SPA 557 Contemporary Span sh Amer can Poetry. (3)**

*se ected semesters*

Major works and prob ems n contemporary poetry and poet cs w th

emphas s on Paz Parra Cardena and new poetry s ce 1 60 Pre

requ te SPA 325

### **SPA 560 Medieval Spanish Literature (3)**

*se ected semesters*

Ma or f gures and work of the M dd e Ages n Spa n

L teracy a d r t a qury **MA** mathemat c **CS** comp ter tat st cs  
quantat ve app at n **HU** huma t s and f ne arts **SB** so a and  
behav o a sc en es **SG** natura s ence gene a core course **SQ** natura  
science quantat ve **C** u tura d ve sty n the nted State **G** goba  
**H** h or ca **S e** nera Stud es page 83

## COLLEGE OF LIBERAL ARTS AND SCIENCES

### **SPA 561 Golden Age Spanish Prose Fiction. (3)**

*selected semesters*

Major figures and works of the 16th and 17th centuries, with emphasis on the picaresque novel.

### **SPA 562 Golden Age Spanish Poetry. (3)**

*selected semesters*

Major figures and works of the 16th and 17th centuries, with emphasis on lyric poetry.

### **SPA 563 Spanish Romanticism. (3)**

*selected semesters*

Principal figures and works of the Spanish romanticism, with emphasis on international literary context of the movement.

### **SPA 564 19th-Century Spanish Prose Fiction. (3)**

*selected semesters*

Principal figures and works of realism in the 19th-century novel, with emphasis on Galdós.

### **SPA 565 20th-Century Spanish Drama. (3)**

*selected semesters*

Principal figures and works of Spanish dramatic literature from the Generation of 1898 to the present.

### **SPA 566 Generation of 1927. (3)**

*selected semesters*

Major poets of the Generation of 1927, with emphasis on works of Lorca, Guillén, Salinas, and Alexandre.

### **SPA 567 Contemporary Spanish Novel. (3)**

*selected semesters*

Major works of post-Civil War Spanish fiction.

### **SPA 568 Cervantes. (3)**

*selected semesters*

Extensive analysis of the prose and theater of Cervantes as a key figure of the Spanish Golden Age. Lecture, seminar.

### **SPA 570 Indigenous Literatures of Spanish America. (3)**

*selected semesters*

Indigenous literary traditions, with emphasis on Nahuatl, Mayan, and Quechua literatures through readings in Spanish translations.

### **SPA 571 Colonial Spanish American Literature. (3)**

*selected semesters*

Major figures and works from conquest to independence.

### **SPA 572 Spanish American Drama. (3)**

*selected semesters*

Major contributions of Spanish American drama, with emphasis on contemporary dramatists.

### **SPA 573 Spanish American Essay. (3)**

*selected semesters*

Major works of the essay, within the framework of intellectual history and literary movements.

### **SPA 574 Spanish American Vanguard Poetry. (3)**

*selected semesters*

Examines poetic developments, 1920–1940, with emphasis on Huidobro, Vallejo, Neruda, and the international context of their works.

### **SPA 575 Contemporary Spanish American Novel. (3)**

*selected semesters*

Principal novels of the *Nueva Narrativa Hispanoamericana*, within the context of contemporary theories of the narrative.

### **SPA 576 Contemporary Spanish American Short Story. (3)**

*selected semesters*

Principal short stories of the *Nueva Narrativa Hispanoamericana*, within the context of contemporary theories of the narrative.

### **SPA 577 Regional Spanish American Literature. (3)**

*selected semesters*

Figures and works of major national (Peru, Argentina, Chile, and Mexico) and regional (Caribbean) literatures. Topics offered on a rotating basis. May be repeated when topics vary.

### **SPA 578 Novel of the Mexican Revolution. (3)**

*selected semesters*

Representative works and authors of this genre (Guzmán, Azuela, Urquiza, Muñoz, and Romero), including related or peripheral offshoots in indigenous novels.

### **SPA 581 Latin American Popular Culture. (3)**

*selected semesters*

Studies in selected topics of Latin American popular culture, with emphasis on appropriate academic models for the critical analysis of these materials.

### **SPA 582 Studies in Latin American Film. (3)**

*selected semesters*

Examines the role of film in contemporary Latin American culture; films viewed and analyzed as casebook examples. Seminar.

### **SPA 591 Seminar. (3)**

*selected semesters*

Spanish and Spanish American literary, cultural, and linguistic topics.

### **SPA 598 Special Topics. (1–4)**

*selected semesters*

Topics may include the following:

- Cultural Studies/Semiotics of Culture

### **SPA 691 Figures and Works Seminar. (3)**

*selected semesters*

Topics may be selected from Spanish and Spanish American literatures.

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

## SWEDISH (SWE)

### **SWE 101 Elementary Swedish. (4)**

*fall*

Reading, writing, speaking, and understanding of basic Swedish. 4 hours lecture, 1 hour lab. Fee.

### **SWE 102 Elementary Swedish. (4)**

*spring*

Reading, writing, speaking, and understanding of basic Swedish. 4 hours lecture, 1 hour lab. Fee. Prerequisite: SWE 101 (or its equivalent).



The Computing Commons offers students an abundance of resources. Tom Trumble photo

**SWE 201 Intermediate Swedish. (4)**

*fa*  
Reviews Swedish grammar with emphasis on the development of the skills of speaking listening comprehension reading and writing 4 hours lecture 1 hour lab Fee Prerequisite SWE 102 or its equivalent

**SWE 202 Intermediate Swedish. (4)**

*spring*  
Reviews Swedish grammar with emphasis on the development of the skills of speaking listening comprehension reading and writing 4 hours lecture 1 hour lab Fee Prerequisite SWE 01 or its equivalent

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog see Omnibus Courses page 5

**THAI (THA)**

**THA 101 Elementary Thai I. (5)**

*fa*  
Basic communication reading and writing skills intensively in a classroom directed supplemented by prose readings in Thai script 4 hours lecture 1 hour lab Fee

**THA 102 Elementary Thai II. (5)**

*spring*  
Basic communication reading and writing skills intensively in a classroom directed supplemented by prose reading 4 hours lecture 1 hour lab Fee Prerequisite THA 101 or its equivalent

**THA 201 Intermediate Thai I. (5)**

*fa*  
Systematic review of grammar Continued development of communication skills with increased emphasis on reading and writing 4 hours lecture 1 hour lab Fee Prerequisite THA 102 or its equivalent  
*General Studies G*

**THA 202 Intermediate Thai II. (5)**

*spring*  
Systematic review of grammar Continued development of communication skills with increased emphasis on reading and writing 4 hours lecture 1 hour lab Fee Prerequisite THA 201 or its equivalent  
*General Studies G*

**Omnibus Courses** For an explanation of courses offered but not specifically listed in this catalog see Omnibus Courses page 56

**VIETNAMESE (VTN)**

**VTN 101 Elementary Vietnamese I. (5)**

*fa*  
Basic skills in modern conversational Vietnamese and development of basic reading and writing skills with special emphasis on tones 4 hours lecture 1 hour lab

**VTN 102 Elementary Vietnamese II. (5)**

*spring*  
Basic skills in modern conversational Vietnamese and development of basic reading and writing skills with special emphasis on tones 4 hours lecture 1 hour lab Prerequisite VTN 01 or its equivalent

**VTN 201 Intermediate Vietnamese I. (5)**

*fa*  
Improves speaking listening reading, and writing competence through dialogues reading passages pattern drills and grammar and communicative exercises. 4 hours lecture, 1 hour lab Prerequisite VTN 102 or its equivalent  
*General Studies G*

**VTN 202 Intermediate Vietnamese II. (5)**

*spring*  
Improves speaking listening reading and writing competence through dialogues reading passages pattern drills and grammar and communicative exercises. 4 hours lecture, 1 hour lab Prerequisite VTN 201 or its equivalent  
*General Studies G*

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog see Omnibus Courses page 56

**Department of Mathematics and Statistics**

math.la.asu.edu

480 965-3951

PS A216

**Andrew Bremner, Chair**

**Regents' Professor:** Trotter

**Professors:** Armbruster Bremner, Bustoz, Gardner Hoppensteadt Ihrig Z Jackewicz Kade Kawask, Kerstead, Kottech Kuang Kuiper La Leonard, Lohr McDona Mittleman, Ncoenko Quigg, Renaut R ghofar, H.A. Smit H.L. Smith, Theme, Young

**Associate Professors:** Baer Barce o, Bount, Car on Ch dress Dr sco , Farne , Geb, Hurbert D. Jones, J. Jones, Kurtz, Lopez, Mahalov, McCarter, Moore N'k t n, Prew tt, Sp elberg, Sus ov Sw mmer, Tay or We fert

**Assistant Professors:** Czygr now Ka szewsk Zand eh Zuo

**Senior Lecturers:** som Ko ossa Rody Vaz, A. Zhu

**Lecturers:** Ashbrook Abramson Boom Down E Jackewicz E ones, Ke gren Km, Mar s, Mart n, M er, Od sh Ruedemann Surgent Tracogna Trapuzzano Turner Waker Ward Y Zhu

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/unlgrd/underprog/degree/relatedfields.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" or higher is

L tera y a d r t c a n q u r y MA a t e a t CS o p t e t a t t q a t t a t i v e p t n HU h a t d f e a t SB a a d e h a v a e c s SG n a t a c e g e n e r a r e r e SQ a t a e n e q a t t i v e C t i v e t y t e U n t d S t a t e s G g b a H t o r S e G e e t p a g e

**COLLEGE OF LIBERAL ARTS AND SCIENCES**

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 MA	4
MAT 271 Calculus with Analytic Geometry II MA	4
MAT 272 Calculus with Analytic Geometry III MA	4
MAT 330 Mathematical Structures L	3
MAT 347 Linear Algebra	3
MAT 370 Intermediate Calculus	3
or MAT 371 Advanced Calculus I	3
<b>Total</b>	<b>21</b>

**Computer Science Requirement**

CSE 110 Principles of Programming with C++ CS	3
or CSE 200 Concepts of Computer Science CS	3
<b>Total</b>	<b>3</b>

**Advanced Courses in Mathematics and Statistics**

Two courses from the following list, but preferably taken from the same grouping. . . . . 6

*Algebra Topology and Number Theory*

MAT 41 Introduction to General Topology	3
MAT 447 Advanced Linear Algebra	3
MA 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	3

*Applied Mathematics and Dynamics*

MAT 451 Mathematical Modeling CS	3
MAT 452 Introduction to Chaos and Nonlinear Dynamics	3
MAT 455 Introduction to Fractals and Applications	3

*Computational Mathematics*

MAT 42 Scientific Computing	3
MAT 421 Applied Computational Methods CS	3
MAT 423 Numerical Analysis I CS	3
MAT 425 Numerical Analysis II CS	3
MAT 427 Computer Arithmetic CS	3

*Differential Equations*

MA 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 CS	3

*Statistical Probability*

STP 420 Introductory Applied Statistics CS	3
STP 421 Probability	3
STP 425 Stochastic Processes	3
STP 427 Mathematical Statistics	3
STP 429 Experimental Statistics CS	3

**Additional Course Work in Mathematics and Statistics**

Three courses in mathematics and statistics . . . . . 9

**Related Field Course Work**

Course work in mathematics, statistics, or related fields . . . . . 12

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

- See "Related Field Course List" page 417

**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 57 semester hours. A grade of "C" 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 MA	4
MAT 271 Calculus with Analytic Geometry II MA	4
MAT 272 Calculus with Analytic Geometry III MA	4
MAT 330 Mathematical Structure L	3
MA 347 Linear Algebra	3
MAT 371 Advanced Calculus I	3
<b>Total</b>	<b>22</b>

**Computer Science Requirement**

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

**Depth Requirement**

Two courses chosen from the following list of advanced courses . . . . . 6

MAT 423 Numerical Analysis CS	3
MAT 425 Numerical Analysis I CS	3
MAT 442 Advanced Linear Algebra	3
MAT 444 Intermediate Abstract Algebra	3
MAT 46 Applied Partial Differential Equations	3
MA 472 Intermediate Real Analysis I	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 Statistics**

Two courses from the following list but preferably taken from the same grouping . . . . . 6

<i>Algebra Topology and Number Theory</i>	
MA 416 Introduction to General Topology	3

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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 3)

*Applied Mathematics and Dynamics*  
 MAT 451 Mathematical Modeling CS 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 CS 3  
 MAT 423 Numerical Analysis I CS 3  
 MAT 425 Numerical Analysis II CS 3  
 MAT 427 Computer Arithmetic CS 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 CS 3

*Statistics and Probability*  
 STP 420 Introductory Applied Statistics CS 3  
 STP 421 Probability 3  
 STP 425 Stochastic Processes 3  
 STP 427 Mathematical Statistics 3  
 STP 429 Experimental Statistics CS 3

**Additional Course Work in Mathematics and Statistics<sup>3</sup>**  
 Three courses in mathematics and statistics . . . . . 9

**Related Fields Course Work<sup>3</sup>**  
 Course work in mathematics, statistics, or related fields . . . . . 10

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

- Acceptable mathematics courses are MAT 274 and upper division MAT courses with the exception of MAT 311, 362, 485, and ASU West MA 411. Acceptable statistics courses are 400 level STP courses

<sup>3</sup> See "Related Field Course List" page 417

**COMPUTATIONAL MATHEMATICAL SCIENCES—B.S.**

The requirements for the B.S. degree in Mathematics and the B.S. degree in Computational Mathematical Sciences are distinct; neither is a subset of the other. A grade of "C" 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 MA . . . . . 4  
 MAT 271 Calculus with Analytic Geometry II MA . . . . . 4  
 MAT 272 Calculus with Analytic Geometry III MA . . . . . 4  
 MAT 274 Elementary Differential Equations MA . . . . . 3  
 MAT 300 Mathematical Structures I L . . . . . 3

MAT 342 Linear Algebra . . . . . 3  
 Total . . . . . 21

**Computer Science Requirement**  
 CSE 200 Concepts of Computer Science CS . . . . . 3  
 CSE 210 Object Oriented Design and Data Structures CS . . . . . 3  
 CSE 310 Data Structures and Algorithms . . . . . 3  
 MAT 420 Scientific Computing . . . . . 3  
 Total . . . . . 12

**Physics Requirement**  
 Two semesters of introductory physics as shown . . . . . 6 or 8  
 PHY 120 University Physics I: Mechanics SQ 3\*  
 or PHY 121 Physics II SQ 4  
 PHY 130 University Physics II: Electricity and Magnetism SQ 3\*  
 or PHY 150 Physics I SQ 4

\* It is highly recommended that students taking PHY 121 and 131 also take the associated laboratory courses PHY 122 and 132

**Advanced Courses in Mathematics and Statistics**  
 Choose one course from each of the following four groups . . . . . 12

*Group One*  
 MAT 371 Advanced Calculus I 3  
 MAT 460 Vector Calculus 3

*Group Two*  
 MAE 470 Computational Fluid Dynamics 3  
 or other course as approved by an advisor  
 MAT 419 Introduction to Linear Programming CS 3  
 MAT 420 Applied Computational Methods CS 3  
 MAT 423 Numerical Analysis I CS 3  
 MAT 425 Numerical Analysis II CS 3  
 STP 429 Experimental Statistics CS 3

*Group Three*  
 MAT 372 Advanced Calculus II 3  
 MAT 427 Computer Arithmetic CS 3  
 MAT 451 Mathematical Modeling CS (3  
 MAT 452 Introduction to Chaos and Nonlinear Dynamics 3)  
 MAT 461 Applied Complex Analysis 3  
 MAT 462 Applied Partial Differential Equations 3  
 MAT 475 Differential Equations 3  
 STP 420 Introductory Applied Statistics CS 3  
 STP 421 Probability 3  
 One course not already chosen from *Group One* or *Two* 3

*Group Four*  
 One course from either *Group One, Two* or *Three* or any other 400 level MAT or STP course except for MAT 485, and ASU West MA 411 3

**Second Science**  
 Choose among the course combinations below for a one year sequence in another science, chosen from astronomy, biology, geology, or chemistry . . . . . 6-9  
 AST 321 Introduction to Planetary and Stellar Astrophysics SQ 3

Literacy and Technical Proficiency 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/cultural diversity the United States G global history See General Studies page 3

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AST 370 Introduction to Galactic and Extragalactic Astrophysics SQ 3

BIO 157 General Biology I SG 4  
 BIO 158 General Biology II SQ 4

GLG 101 Introduction to Chemistry I Physical SG 3  
 GLG 102 Introduction to Chemistry II Historical SG 4/H 3

Any two of CHM 113, 114, 115, 116, 117 and 118 as permitted by the Department of Chemistry and Biochemistry

Other course combination may be used with approval of department advisor.

Both AST 370 and 371 or both AST 114 and 322 must be taken to receive SQ credit.

Both GLG 101 and 102 must be taken to receive SQ credit.

Both GLG 101 and 102 must be taken to receive SG credit.  
 See the individual course listing for restrictions.

**Advanced Science Course or Internship**

One advanced course or internship for which a one-year course is required in the same science is required for a full-time internship subject to advisor approval.

MAT 484 Internship 3  
 Any upper division course in plant biology, P.B. Chemistry, CHM or microbiology MIC 3  
 Any upper division science or engineering course in the related field course list 3

Other course may be used to satisfy this requirement with the approval of a Department of Mathematics and Statistics advisor. Note that courses with prefixes ECN, FIN, MAT, PH, and STP do not count toward this requirement. See "Related Field Course List" page 417.

**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" 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:

<b>Core Courses</b>	
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
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
<b>Total</b>	<b>33</b>
<b>Computer Science Requirement</b>	
CSF 200 Concepts of Computer Science	3
<b>Total</b>	<b>3</b>

**Additional Advanced Courses in Mathematics and Statistics**

Three courses from the following list	9
MAT 274 Elementary Differential Equations MA	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 0

See "Related Field Course List," page 417.

**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.

**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
<b>Total</b>	<b>11</b>

Electives must be upper division courses in mathematics (MAT) or Statistics and Probability (STP). Students may not apply MAT 362, 485, or a course not offered at the ASU main campus to the math minor, unless otherwise approved by a math 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
<b>Total</b>	<b>20</b>

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
MAT 421 Scientific Computing	3
MA 421 Applied Computational Method CS	3
MAT 423 Numerical Analysis I CS	3
or MAT 425 Numerical Analysis II CS	3
<b>Total</b>	<b>20</b>

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

**SECONDARY EDUCATION—B.A.E.**

**Mathematics.** Students pursuing the major teaching field may choose from two options:

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**Option One** With this option, the academic specialization consists of the following required courses.

CSE	Principles of Programming with C++ CS	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
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 Mathematics in Secondary School and MTE 494 Special Topics: 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.

**Option Two** This option may be exercised only in combination with option two under "Chemistry," page 361, or "Physics," page 436. The program consists of 30 semester hours in mathematics. Required courses are as follows:

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
MAT 370	Intermediate Calculus	3
	or MAT 371 Advanced Calculus I 3	
	or MAT 460 Vector Calculus 3	
MAT 443	Introduction to Abstract Algebra	3
Total		27

**Recommended**

CSE 110	Principles of Programming with C++ CS	3
	or CSE 200 Concepts of Computer Science CS 3	

**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
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, polynomial factoring, exponential rates, and radicals. Prerequisite: 1 year of high school algebra.

**MAT 114 College Mathematics. (3)**

*fall, spring, summer*  
Applications of basic college-level mathematics to real-world 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. 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 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, trigonometric matrices, polar coordinates, vector, complex numbers, and mathematical induction. Prerequisite: with a grade of B- or higher, MAT 106. Prerequisite with a grade of C- or higher, MAT 117 or two years of high school algebra.  
*General Studies MA*

**MAT 210 Brief Calculus. (3)**

*fall, spring, summer*  
Differentiation and integration of elementary functions with applications. Not open to students with credit for MA 260, 270, or 290. Prerequisite: MAT 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 transformation, and eigenvalue. 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. Includes induction. Emphasizes connections to computer science. Prerequisite: 1 semester of calculus or computer programming.

**MAT 251 Calculus for Life Sciences. (3)**

*fall and spring*  
Differentiation and integration 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, differentiation, and integration of elementary functions, emphasizing physics 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*

Library and critical inquiry MA, mathematical CS, computer statistics quantitative application, HUMANA, teacher education, SB, social and behavioral sciences, SG, natural and environmental sciences, SQ, natural and physical sciences, C, cultural diversity in the United States, G, global history. See General Studies page 83.

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### **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*

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 and Spring semesters*

Real numbers, limits and continuity, differential and integral calculus of functions of one 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 or higher: MAT 170 or satisfactory score on placement examination.

*General Studies: MA*

### **MAT 271 Calculus with Analytic Geometry II. (4)**

*Fall and Spring semesters*

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 or higher: MAT 270 or its equivalent.

*General Studies: MA*

### **MAT 272 Calculus with Analytic Geometry III. (4)**

*Fall and Spring semesters*

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

*General Studies: MA*

### **MAT 274 Elementary Differential Equations. (3)**

*Fall and Spring semesters*

Introduces ordinary differential equations adapted to the needs of students in engineering and the sciences. Prerequisite: 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 applications. Includes applications, problem solving using MATLAB. Lecture, computing lab. Fee. Prerequisite: 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, perimeter, 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 semesters*

Linear equations, matrices, determinants, vector spaces, bases, linear transformations, and similarity. Inner product spaces, eigenvectors, orthonormal bases, diagonalization, and principal axes. Prerequisite: corequisite: MAT 272 or its equivalent.

### **MAT 343 Applied Linear Algebra. (3)**

*Fall and Spring*

Solving linear systems, matrices, determinants, vector spaces, bases, linear transformation, eigenvectors, norms, inner products, decomposition, applications. Problem solving using MATLAB. Lecture, computing lab. Fee. Prerequisite: corequisite: 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 25 or 270 or instructor approval.

*General Studies: CS*

### **MAT 362 Advanced Mathematics for Engineers and Scientists. (3)**

*Fall and Spring semesters*

Vector analysis, Fourier analysis, and partial differential equations. Prerequisites: MAT 222 and 274 or their equivalents.

### **MAT 370 Intermediate Calculus. (3)**

*Fall and Spring*

Theory, behavior, basic variable calculus, continuity, derivative, Riemann integration, sequences and series. Not open to students who have received a C or higher in MAT 371. Students may not count both MAT 370 and 371 toward a mathematics degree. Prerequisites: MAT 27 or 300.

### **MAT 371 Advanced Calculus I. (3)**

*Fall and Spring*

Real number completeness, sequences, series, continuity, uniform convergence, derivative, Riemann integration, pointwise uniform convergence, Taylor's theorem. Students may not count both MAT 370 and 371 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 mapping theorem. Not open to students with credit for MAT 460. Prerequisite: MAT 371 or corequisite: MAT 342.

### **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, inclusion-exclusion, recurrence relations, generating functions, induction, excursions, Ramsey theory, and combinatorial designs. Prerequisite: both MAT 300 or 243 and 342 or 242 or on/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. Prerequisite: both MAT 300 or 243 and 342 or 242 or on/instructor approval.

### **MAT 419 Introduction to Linear Programming. (3)**

*Spring*

Simplex method, duality, and network flow. Application to game theory, geometry, combinatorics, graph theory, and puzzles. Prerequisites: a combination of CSE 110 or 200 or 210 and MAT 310 or 243 and 342 or 242 or on/instructor approval.

*General Studies: CS*

**MAT 420 Scientific Computing (3)**

*fa*  
Surveys and applies programming language, libraries, and scientific visualization tools. Programming assignments emphasize software development skills. Fee. Prerequisites: a combination of CSE 200 and MAT 274 and 420. The requirements of your instructor approve.

**MAT 421 Applied Computational Methods. (3)**

*fa and spring*  
Numerical methods for quadrature, differential equations, roots, nonlinear equations, interpolation, approximation, nonlinear equations, floating point arithmetic, and roundoff error. Prerequisites: both MAT 271 or its equivalent and fluent in computer programming, preferably FORTRAN, or on your instructor's approval.  
*General Studies CS*

**MAT 423 Numerical Analysis I. (3)**

*fa*  
Analysis and algorithms for numerical solutions, nonlinear equations, direct solution, iterative procedures, optimization. Determination of eigenvalues. Elementary computer arithmetic. Prerequisites: both MA 342 and fluency in computer programming or on your instructor's approval.  
*General Studies S*

**MAT 425 Numerical Analysis II. (3)**

*spring*  
Analysis of algorithms for numerical interpolation, integration, and differentiation. Numerical solution of ordinary differential equations and method of lines. Seeking methods, survey course should take MAT 421. Prerequisites: both MAT 274 and fluent in computer programming or on your instructor's approval. MAT 371 recommended.  
*General Studies CS*

**MAT 427 Computer Arithmetic. (3)**

*selected semesters*  
Number systems, hardware, software, arithmetic overflow, signification, rounding, multiprecision, and automatic error. Impact on languages, arithmetic, robust programming, and software development. Prerequisite: on your instructor's approval. MAT 421 and 423 or 425 or on your instructor's approval.  
*General Studies CS*

**MAT 442 Advanced Linear Algebra. (3)**

*fa*  
Fundamentals of linear algebra, dual spaces, invariant subspaces, canonical forms, linear and quadratic forms, adjoint linear algebra. Prerequisite: both MAT 300 and 342 or on your instructor's approval.

**MAT 443 Introduction to Abstract Algebra. (3)**

*fa*  
Introduces concepts of abstract algebra. Not open to students with credit for MAT 444. Prerequisites: both MAT 300 and 342 or on your instructor's 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 on your instructor's 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 on your instructor's approval.

**MAT 447 Cryptography. (3)**

*fa and spring*  
Block cipher, stream ciphers, congruence arithmetic, format on the cryptographic key systems, key exchange, electronic signatures. Prerequisites: MAT 242 or 342, 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's approval. Prerequisites: both MAT 242 or 342 and 274 or on your instructor's approval.  
*General Studies CS*

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

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

**MAT 455 Introduction to Fractals and Applications. (3)**

*spring*  
Fractals, self-similar structures, fractal with fractal function systems of maps, complex fractals, fractal dimensions, chaotic dynamics on fractals, applications. Prerequisites: MAT 274, 342 or 242, MAT 371 recommended.

**MAT 460 Vector Calculus. (3)**

*spring*  
Vectors, curvilinear coordinates, Jacobian, multiple integrals, theorem of Gauss, Stokes, and divergence theorems. Not open to students with credit for MA 372. Prerequisites: MAT 242 or 342, 272, 274.

**MAT 461 Applied Complex Analysis (3)**

*fa 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 transform. Prerequisites: MAT 242 or 342, 274.

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

*fa*  
Introduces analysis, metric spaces with emphasis on the real line. Appropriate preparation for MAT 57. Prerequisites: MAT 300, 342.

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

*spring*  
Analysis in  $\mathbb{R}^n$ , multiple integrals, Lebesgue integration, change of variables formula, convergence theorems for integrals. Prerequisite: MAT 472 or instructor's approval.

**MAT 475 Differential Equations. (3)**

*fa*  
Asymptotic behavior of solutions, linear and nonlinear ordinary differential equations, stability, Sturm-Liouville problems, boundary value problems, and singular point behavior of autonomous systems. Prerequisites: MAT 242 or 342, 274.

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

*spring*  
First-order quasilinear, second-order linear wave, Laplace, heat, and Schrödinger equations, harmonic functions, maximum principle, Fourier series, separation of variables. Prerequisites: MAT 274 or 475, 372 or 472.

**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 502 Neural Modeling. (3)**

*fa and spring*  
Mathematical modeling of the trochlear process in nerve cable theory, neuronal branching, spine bifurcation analysis of excitable membrane models. Prerequisite: MAT 274.

**MAT 503 Mathematical Cell Physiology (3)**

*fa and spring*  
Mathematical modeling of various aspects of cell physiology. Diffusion, membrane transport, electrical mechanisms, calcium oscillation, and wave propagation.

Literacy and critical analysis. MA: at least CS: computer statistics qualitative approach. HU: human development. SB: a and behavior. SG: trajectory. GE: general education. SQ: quantitative. C: traditionally. The noted title. G: global. H: history. See General Studies page 83.

## COLLEGE OF LIBERAL ARTS AND SCIENCES

### **MAT 504 Mathematical Aspects of Biotechnology. (3)**

*fa and sp g*

Bacterial growth, bacterial genetics, gene expression, stoichiometry of metabolic pathways, random walks, diffusion processes, biomolecules. Prerequisite: instructor approval.

### **MAT 505 Perturbation Methods. (3)**

*selected semesters*

Nonlinear oscillations, strained coordinates, renormalization, multiple scales, boundary layers, matched asymptotic expansions, trigonometric problems, and WKB method. Cross-listed as MAE 555. Credit shared for only MAE 505 or MA 505.

### **MAT 514 Enumerative Combinatorics I. (3)**

*fa*

First semester of a systematic development of enumerative combinatorics, including elementary counting techniques, generating functions, and ordered sets. Prerequisite: graduate standing or instructor approval.

### **MAT 515 Enumerative Combinatorics II. (3)**

*spring*

Second semester of a systematic development of enumerative combinatorics, including lattices, exponential structures, symmetric functions, and selected special topics. Prerequisite: MAT 514 or instructor approval.

### **MAT 516 Graph Theory I. (3)**

*fa*

First semester of a systematic development of graph theory, including matroids, connectivity, Arboricity, planarity, coloring, network flows. Prerequisite: graduate standing or instructor approval.

### **MAT 517 Graph Theory II. (3)**

*spring*

Second semester of a systematic development of graph theory, including dense and sparse graphs, Ramsey theory, Hamiltonicity, random graphs, minors. Prerequisite: MAT 516 or instructor approval.

### **MAT 518 Combinatorial Optimization I. (3)**

*fa*

First semester of a systematic development of combinatorial optimization, including linear programming, duality, polynomial algorithms, network flow algorithms, weighted matchings. Prerequisite: graduate standing or instructor approval.

### **MAT 519 Combinatorial Optimization II. (3)**

*spring*

Second semester of a systematic development of combinatorial optimization, including matroid algorithms, theory of NP-completeness, polynomial-time approximation, dynamic programming. Prerequisite: MAT 518 or instructor approval.

### **MAT 520 Numerical Linear Algebra. (3)**

*fa*

Direct solution of linear systems, iterative methods, eigenvalues and eigenvectors, singular value decomposition, the QR algorithm, error propagation, arithmetic, and stability. Prerequisites: both MAT 342 and 423 or 422 or instructor approval.

### **MAT 521 Iterative Methods. (3)**

*spring*

Numerical methods for solving linear and nonlinear systems, fixed-point equations, symmetric and nonsymmetric iterative methods for linear systems, conjugate gradients, multigrid methods, preconditioning, Krylov methods. Prerequisites: both MA 371 and 423 or 421 or instructor approval.

### **MAT 523 Numerical Optimization. (3)**

*selected semesters*

Linear programming, constrained optimization, search algorithms, conjugate gradients, quasi-Newton methods, constrained nonlinear optimization, gradient projection, and penalty methods. Prerequisite: MAT 342 or 310 or 460 or 520 or equivalent or instructor approval.

### **MAT 524 Parallel Numerical Algorithms. (3)**

*selected semesters*

Algorithm for mass-velocity parallel hyperbolic architecture, parallel FORTRAN, solution of linear and nonlinear systems, partial differential equations, iterative methods, multigrid, domain decomposition. Prerequisite: both MAT 371 and 423 or 421 or instructor approval.

### **MAT 530 Numerical Solution of Ordinary Differential Equations. (3)**

*fa*

One-step, multi-step methods, consistency, order, stability, convergence, discretization, roundoff errors, error estimation, adaptive strategy, implementation, software for nonlinear equations. Prerequisites: both MAT 371 and 423 or 421 or instructor approval.

### **MAT 531 Numerical Solution of Stiff Differential Systems. (3)**

*spring*

Runge-Kutta methods, order conditions, construction of highly stable methods, order bars, error estimation, step size selection, truncation, properties, multi-step methods. Prerequisites: both MAT 371 and 423 or 421 or instructor approval.

### **MAT 533 Computational Elliptic and Parabolic Partial Differential Equations. (3)**

*fa I*

Parabolic and elliptic equations, finite difference, finite element methods, stability, consistency, convergence, practical aspects, applications, software. Prerequisites: both MAT 371 and 423 or 421 or instructor approval.

### **MAT 534 Computational Hyperbolic Partial Differential Equations. (3)**

*spring*

Numerical solutions of hyperbolic PDE, finite difference methods, well-posedness, stability, consistency, convergence, adaptive grids, Maxwell's equations, elastic wave propagation, Navier-Stokes. Prerequisite: both MAT 371 and 423 or 421 or instructor approval.

### **MAT 535 Spectral Methods for Partial Differential Equations. (3)**

*selected semesters*

Spectral, pseudospectral, Galerkin, collocation methods, auxiliary methods, global approximation, perturbation, stability, convergence, solution for linear and nonlinear systems. Prerequisites: both MAT 371 and 423 or 421 or instructor approval.

### **MAT 543 Abstract Algebra. (3)**

*fa*

Groups, modules, rings, and fields, Galois theory, homomorphisms, algebra and the representation theory. Prerequisite: MAT 444 or instructor approval.

### **MAT 544 Abstract Algebra. (3)**

*spring*

Continuation of MAT 543. Prerequisite: MA 543 or instructor approval.

### **MAT 551 Linear Operators and Integral Equations. (3)**

*spring*

Bounded linear and compact operators, Hilbert spaces, linear integral equations, Fredholm and Hilbert-Schmidt theory, and approximate methods, Dirichlet problems. Prerequisite: MA 242 and 462 or the relevant course.

### **MAT 555 Fractal Geometry. (3)**

*selected semesters*

Geometry and analysis of fractal sets, definitions of dimensions, calculation of dimensions, projection, products of fractals, random fractals, multifractal measure, and application. Prerequisite: MAT 371, 455, MAT 472 recommended.

### **MAT 560 Dynamical Systems Methods in Fluid Dynamics. (3)**

*fa*

Apples modern dynamical systems methods, fluid mechanics, bifurcations, normal forms, nonlinear dynamics, pattern formation, mixing, and Lagrangian chaos. Prerequisite: graduate standing or instructor approval.

### **MAT 562 Nonlinear Analysis of PDEs in Fluids. (3)**

*spring*

Sobolev spaces, incompressible Euler and Navier-Stokes equations, weak and strong solutions, attractors, and the connection with turbulence, geophysical applications. Prerequisite: graduate standing or instructor approval.

### **MAT 570 Real Analysis. (3)**

*spring*

Lebesgue integration, selected function spaces, differentiation, abstract measure theory, and elements of functional analysis. Prerequisite: MAT 372 or instructor approval.

## DEPARTMENT OF MATHEMATICS AND STATISTICS

### **MAT 571 Real Analysis. (3)**

*fa*  
Continuation of MAT 570. Prerequisite: MAT 570 or instructor approval

### **MAT 572 Complex Analysis. (3)**

*fa*  
Analytic functions series and product representation entire and meromorphic functions normal families Riemann mapping theorem harmonic functions and Riemann surfaces Prerequisite: MAT 371 or instructor approval

### **MAT 573 Complex Analysis. (3)**

*spring*  
Continuation of MAT 572 Prerequisite: MAT 572 or instructor approval

### **MAT 574 Theory of Ordinary Differential Equations. (3)**

*selected semesters*  
Systems existence proofs singularities asymptotic behavior of solutions boundedness of solutions eigenvalues and eigenfunctions and perturbation theory Prerequisite: MAT 372 or instructor approval

### **MAT 575 Theory of Ordinary Differential Equations and Dynamical Systems. (3)**

*selected semesters*  
Geometric approach to ODE and dynamical systems unstable center manifolds, structural stability normal forms averaging chaos persistence May be repeated for credit with instructor approval Prerequisites: both MAT 452 and 475 or on y MAT 574 or on y instructor approval

### **MAT 576 Theory of Partial Differential Equations. (3)**

*selected semesters*  
Existence and uniqueness theorems boundary value and initial value problems characteristics Green's functions maximum principles but not and weak solutions Prerequisite: knowledge of Lebesgue integration or instructor approval

### **MAT 577 Theory of Partial Differential Equations. (3)**

*selected semesters*  
Continuation of MAT 576 Prerequisite: MAT 576 or instructor approval

### **MAT 578 Functional Analysis. (3)**

*selected semesters*  
Locally convex normed and Hilbert spaces Linear operators spectral theory and application to classical analysis Prerequisite: MAT 4 or 571 or instructor approval

### **MAT 579 Functional Analysis. (3)**

*selected semesters*  
Continuation of MAT 578 Prerequisite: MAT 578 or instructor approval

### **MAT 591 Seminar (1-12)**

*selected semesters*  
Topics may include the following:  
• Algebra 1-3  
• Analysis 1-3  
• Applied Mathematics 1-3  
• Combinatorial Mathematics 1-3  
• Mathematical Logic 1-3  
• Numerical Analysis 1-3  
• Topology 1-3

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog see Omnibus Courses page 56

## **MATHEMATICS EDUCATION (MTE)**

### **MTE 180 Theory of Elementary Mathematics. (3)**

*fa spring summer*  
Number system intuitive geometry elementary algebra and measurement. Intended for prospective elementary school teachers Fee Prerequisite: MAT 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 arithmetic systems overview of elementary number theory including primes factorization divisibility, bases modular systems, near 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 on geometry Prerequisite: MTE 380 or instructor approval

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

*fa*  
Examines secondary school curriculum material and analyzes instructional devices teaching strategies evaluate techniques diagnosis and remedial and problem solving Fee Prerequisite: instructor approval

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

*spring*  
Topics in geometry number theory algebra and analysis Emphasis on teaching principles Prerequisite: MAT 310 or instructor approval

### **MTE 484 Theory of Elementary Mathematics Internship. (3)**

*fa and spring*  
Employs hands-on activities and manipulates to advance mathematical understanding in second to fourth grade student

### **MTE 494 Special Topics. (1-4)**

*fa and spring*  
Topics may include the following:  
• Advanced Methods of Teaching Elementary Mathematics 3  
Continuation of MTE 482 Prerequisite: MTE 482

### **MTE 585 Modern Geometry for Teachers. (3)**

*once a year*  
Euclidean projective and non-Euclidean geometries Fee Prerequisite: instructor approval

### **MTE 587 Analysis for Teachers. (3)**

*selected semesters*  
Subject matter in mathematics appropriate for accelerated programs in elementary school including analytic geometry and calculus Prerequisite: instructor approval

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog see Omnibus Courses page 56

## **STATISTICS AND PROBABILITY (STP)**

### **STP 220 Conceptual Statistics. (3)**

*fa and spring*  
Treats the concepts and vocabulary needed to evaluate statistical reports on real technology and society Aggressive emphasis on understanding over computation Lecture teamwork Prerequisite: MAT 114 or 117 or its equivalent  
*General Studies CS*

### **STP 226 Elements of Statistics. (3)**

*fa spring summer*  
Basic concept and methods of statistics including descriptive statistics, confidence test estimation sampling and correlation Not open to majors in mathematics or the physical sciences Prerequisite: MAT 114 or 117 or its equivalent  
*General Studies CS*

### **STP 326 Intermediate Probability. (3)**

*fa 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*

Literacy and inquiry **MA** mathematics **CS** computer literacy quantitative applications **HU** humanities and fine art **SB** social and behavioral science **SG** natural science—general core courses **SQ** natural science—quantitative **C** culture diversity the United States **G** global **H** historic See General Studies page 83

**COLLEGE OF LIBERAL ARTS AND SCIENCES**

**STP 420 Introductory Applied Statistics. (3)**

*fall spring summer*  
 introductory probability descriptive statistics sampling distribution parameter estimation, tests of hypotheses chi square tests regression on analysis, analysis of variance and nonparametric tests Prerequisite. MAT 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 transformation of random variables and central limit theorem Prerequisites. MAT 272 and 300 and STP 420 or their equivalents.

**STP 425 Stochastic Processes. (3)**

*spring*  
 Markov chains stationary distributions pure jump processes 2D order processes and other topics in stochastic processes Prerequisites. MAT 342 STP 421

**STP 427 Mathematical Statistics. (3)**

*spring*  
 Limiting distribution interval estimation point estimation sufficient statistics and tests of hypotheses Prerequisites. STP 420 421

**STP 429 Experimental Statistics. (3)**

*spring*  
 Statistical inference for controlled experimentation Multiple regression correlation analysis of variance multiple comparisons and nonparametric procedures Prerequisite. STP 420 or its equivalent.  
*General Studies CS*

**STP 525 Advanced Probability. (3)**

*selected semesters*  
 Measure theoretic foundations of probability distribution functions and characteristic functions laws of large numbers and central limit theorem conditional probabilities martingales and topics in stochastic processes Prerequisites. both MAT 571 and STP 421 or on your instructor approval

**STP 526 Theory of Statistical Linear Models. (3)**

*fall*  
 Multivariate distribution distribution of quadratic forms full and nonfull rank models generalized inverse unbalanced data variance components and the large sample theory Prerequisites. STP 427, knowledge of matrix algebra

**STP 530 Applied Regression Analysis. (3)**

*fall*  
 Method of least squares simple and multiple linear regression polynomial regression analysis of residuals dummy variables and model building. Prerequisite. STP 420 or its equivalent

**STP 531 Applied Analysis of Variance. (3)**

*spring*  
 Factorial design balanced and unbalanced data fixed and random effects randomized block Latin squares analysis of covariance and multiple comparisons Prerequisite. STP 420 or its equivalent.

**STP 532 Applied Nonparametric Statistics. (3)**

*fall*  
 One sample tests for two or more related or independent samples measures of correlation and tests of trend and dependence Prerequisite. STP 420 or its equivalent

**STP 533 Applied Multivariate Analysis (3)**

*spring*  
 Discriminant analysis principal components factor analysis cluster analysis and canonical correlation Prerequisite. STP 420 or its equivalent

**STP 534 Applied Discrete Data Analysis. (3)**

*selected semesters*  
 Models for discrete and count data measures of association and log-linear and regression models for contingency tables Prerequisite. STP 420 or its equivalent

**STP 535 Applied Sampling Methodology (3)**

*spring*  
 Simple random stratified cluster sampling, variance estimation in complex survey nonparametric superpopulation approaches nonresponse models computational methods Prerequisite. STP 420 or its equivalent

**STP 591 Seminar. (1-12)**

*selected semesters*  
 Topics may include the following.  
 • Probability 1-3  
 • Statistics. 1-3

**STP 593 Applied Project. (1-12)**

*selected semesters*

**STP 599 Thesis. (1-12)**

*selected semesters*

**Omnibus Courses.** For an explanation of courses offered below not specifically stated in this catalog see Omnibus Courses page 56

**Department of Microbiology**

lsu.la.asu.edu microbiology

480 965-1457

LSE 210

**Edward A. Birge, Chair**

**Professors:** Burke Harrington Jacobs, Mrs. Mossman, Schmidt

**Associate Professors:** Birge Hoffman Hogue, Stout

**Assistant Professors:** Chang Garcia Piche

**Clinical Faculty:** Downs, Lefevre Mass Roberts

**MICROBIOLOGY—B.S.**

The B.S. degree in Microbiology consists of a minimum of 41 semester hours in microbiology and approved related fields. Students majoring in Microbiology are required to take the following courses:

BIO 187 General Biology I SG	4
BIO 188 General Biology II SQ	4
BIO 340 General Genetics	4
Choose between the course combinations below	8
BCH 361 Principles of Biochemistry 3	
BCH 367 Elementary Biochemistry Laboratory 1	
CHM 231 Elementary Organic Chemistry SQ <sup>1, 3</sup>	
CHM 233 Elementary Organic Chemistry Laboratory SQ <sup>1, 1</sup>	
CHM 331 General Organic Chemistry 3	
CHM 332 General Organic Chemistry 3	
CHM 333 General Organic Chemistry Laboratory 1	
CHM 336 General Organic Chemistry Laboratory 1	
MIC 206 Microbiology Laboratory SG <sup>2</sup>	1
MIC 222 Biology of Microorganisms	3
MIC 322 Advanced Bacteriology Laboratory L	2
MIC 360 Bacterial Physiology	3
MIC 401 Research Paper L <sup>1</sup>	1
total	30

Both CHM 231 and 233 must be taken to secure SQ credit

<sup>1</sup> Both MIC 205 and 206 must be taken to secure SG credit

Both MIC 307 and 401 must be taken to secure L credit

A minimum of 11 semester hours of upper division electives in microbiology or approved related fields must be taken

These elective hours must include two courses chosen from the following:

MIC 421 Experimental Immunology . . . . .	2
MIC 446 Techniques in Molecular Biology Genetics Lab. . . . .	2
MIC 470 Bacterial Diversity and Systematics . . . . .	4
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 270, 290, or 294 as their MA course and BIO 420 or any CSE course that meets the CS requirement). The required supplemental courses are as follows:

CHM 113 General Chemistry SQ . . . . .	4
CHM 115 General Chemistry with Qualitative Analysis SQ . . . . .	5
PHY 111 General Physics SQ* . . . . .	3
PHY 112 General Physics SQ* . . . . .	3
PHY 113 General Physics Laboratory SQ* . . . . .	1
PHY 114 General Physics Laboratory SQ* . . . . .	1
Total . . . . .	17

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

**CLINICAL LABORATORY SCIENCES—B.S.**

The goal of the Clinical Laboratory Sciences degree program is to prepare 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 student majoring in Clinical Laboratory Sciences is required to take 40 hours of clinical laboratory sciences courses. Also required are the following courses:

BCH 361 Principles of Biochemistry . . . . .	3
BIO 360 Animal Physiology . . . . .	3
CHM 113 General Chemistry SQ . . . . .	4
CHM 231 Elementary Organic Chemistry SQ . . . . .	3
MIC 205 Microbiology SG <sup>2</sup> . . . . .	3
or MIC 22 Biology of Microorganisms <sup>3)</sup>	
MIC 206 Microbiology Laboratory SG <sup>2</sup> . . . . .	1
Total . . . . .	17

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

<sup>2</sup> 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 department for a program brochure. For proper course planning, students must meet with a clinical laboratory sciences advisor

**MINOR IN MICROBIOLOGY**

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

BIO 187 General Biology I SG . . . . .	4
BIO 188 General Biology II SQ . . . . .	4
BIO 340 General Genetics . . . . .	4
MIC 206 Microbiology Laboratory SG . . . . .	1
MIC 220 Biology of Microorganisms . . . . .	3
MIC 302 Advanced Bacteriology Laboratory L . . . . .	2
MIC 360 Bacterial Physiology . . . . .	3
Total . . . . .	21

<sup>1</sup> Both MIC 205 and 206 must be taken to secure SG credit

<sup>2</sup> 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

**GRADUATE PROGRAMS**

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

The department participates in the interdisciplinary program for the M.S. and Ph.D. degrees in Molecular and Cellular Biology. See the *Graduate Catalog* for courses, faculty, and program information, or call 480 965 0743 for more information.

**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 medical significant fungi and bacteria. 3 hours lecture 9 hours lab. Fee. Prerequisite admission to the Clinical Laboratory Sciences professional study program

Literacy and critical thinking MA mathematical CS computer statistics quantitative applications HU humane and fine art SB behavioral sciences SG natural science—general courses SQ natural science quantitative Cultural diversity in the United States Global health care and Global Studies page 83

## COLLEGE OF LIBERAL ARTS AND SCIENCES

### CLS 330 Principles of Clinical Hematology I Body Fluids. (3)

*fa*

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 College 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 College Laboratory Sciences professional study program

### CLS 411 Advanced Applications of Clinical Chemistry. (4)

*fa*

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 College 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 College 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 medical significant bacteria, fungi, and parasites. Minimum 180 hours practicum. Prerequisite: admission to the College Laboratory Sciences professional study program.

### CLS 430 Principles of Clinical Hematology II Hemostasis. (3)

*fa*

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

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

*fa*

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

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

*spring*

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

### CLS 450 Principles of Clinical Laboratory Administration. (2)

*fa 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 College Laboratory Sciences professional study program

*General Studies L 1 credit a so 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

at admission to the laboratory. Prerequisite: admission to the College Laboratory Sciences professional study program.

*General Studies L 1 credit a so earned in CLS 450*

**Omnibus Courses** For an explanation of courses offered but not specifically stated in this catalog, see Omnibus Courses page 56

## MICROBIOLOGY (MIC)

### MIC 205 Microbiology. (3)

*fa, 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 ony instructor approval

*General Studies SG 1 credit a so earned in MIC 206*

### MIC 206 Microbiology Laboratory. (1)

*fa, spring, summer*

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

*General Studies SG 1 credit a so earned in MIC 205*

### MIC 220 Biology of Microorganisms. (3)

*fa 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)

*fa and spring*

Advanced laboratory techniques in bacterial growth, physiology, genetics, and microscopy. Required of Microbiology majors. 4 hours lab. Fee. Prerequisite: 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 1 credit a so earned in MIC 401*

### MIC 360 Bacterial Physiology. (3)

*fa and spring*

Mechanisms and control of cellular metabolic structures and functions. Prerequisite: MIC 220. Prerequisite: BCH 361. Instructor approval.

### MIC 380 Medical Parasitology. (3)

*fa*

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:

- Disease and AIDS in America

### MIC 401 Research Paper. (1)

*fa, spring, summer*

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

*General Studies L 1 credit a so earned in MIC 302*

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

*fa*

Molecular and cellular foundations of immunology. Antigen-antigen interaction, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives. Prerequisites: both CHM 231 or 331 and MIC 205 or 220 or ony instructor approval

### MIC 421 Experimental Immunology. (2)

*fa and spring*

Introduces the basic techniques, methods, and assay used in immunology. 6 hours lab. Fee. Prerequisites: a combination of CHM 231 and 331 and MIC 302 or ony 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 immunology of diseases. Prerequisite: M C 420 or instructor approval.

**MIC 441 Bacterial Genetics. (3)***spring*

Survey of genetic exchange and regulatory processes in bacteria and the viruses. Bacteria and viruses as tools in genetic engineering. Prerequisites: both BIO 340 and M C 205 or 220 or on your instructor approval.

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

Technique of mutagenesis, mapping, and strand and genetic binary construction. 4 hours lab. Prerequisites: M C 206, 302. Pre- or corequisite: M C 441.

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

Molecular genetic principles, plasmid construction, purification, and characterization, PCR, mutagenesis, hybridization, and sequence analysis, protein quantitation, immunology, detection, and electrophoresis. Cross-listed as MBB 445. Credit awarded for only MBB 445 or M C 445. Prerequisites: both BIO 340 and M C 302 or on your instructor approval.

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

Molecular genetic techniques, plasmid construction, purification, and characterization, PCR, mutagenesis, hybridization, and sequence analysis, protein quantitation, immunology, detection, and electrophoresis. Cross-listed as MBB 446. Credit awarded for only MBB 446 or M C 446. Pre- or corequisite: MBB 445 or M C 445.

**MIC 461 Geomicrobiology. (3)***spring*

Past and present interactions among microbial, geochemical, material, and biogeochemical cycles involving carbon, sulfur, phosphate, nitrogen, and metals. Cross-listed as GLG 461. Credit awarded for only GLG 461 or M C 461. Prerequisites: introductory courses in chemistry and microbiology or geochemical sciences. Instructor approval.

**MIC 470 Bacterial Diversity and Systematics. (4)***fall*

Biology class function and enrichment culture of the bacterial pathogen. 2 hours lecture, 6 hours lab. Fee. Prerequisite: M C 302.

**MIC 485 General Virology. (3)***fall*

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

**MIC 486 General Virology Laboratory. (2)***selected semesters*

Fundamentals of virus detection, isolation, and assay; propagation of virus in mammalian culture, recombinant viruses, and vector construction. 6 hours lab. Prerequisite: M C 302. Pre- or corequisite: M C 485.

**MIC 494 Special Topics. (1-4)***selected semesters*

Topics may include the following:

- Clinical Bacteriology Laboratory. 3
- Service Learning: Borealis. 3

**MIC 495 Undergraduate Research. (1-6)***fall, spring, summer*

Supervised research in microbiology. May be repeated for credit. Lab. Prerequisites: M C 206, 220, 302. Instructor approval.

**MIC 527 Neuroimmunology. (3)***selected semesters*

Studies in the influence of immunity and the immune systems on function of the mind, neuroimmunology of diseases, and the neuroimmunology of cognitive function. Seminar. Prerequisite: M C 420 or instructor approval.

**MIC 581 Molecular Mechanism of Pathogenesis. (3)***selected semesters*

Pathogen mechanisms and host responses in viral and/or bacterial diseases. Prerequisites: both M C 381 and 420 or on your instructor approval.

**MIC 585 Molecular Virology. (3)***fall*

Selected topics concerning molecular aspects of eukaryotic viruses, replication, and pathogenesis. Prerequisite: instructor approval.

**MIC 591 Seminar. (1-12)***fall and spring*

Topics may include the following:

- Bacteriology 1, 3
- Current Research in Microbiology 1, 3
- Enzymology 1, 3
- Genetic Engineering 1, 3
- Genetics 1, 3
- Immunology 1, 3
- Molecular Virology 1, 3
- Neuroimmunology 1, 3
- Pathogenic Bacteriology 1, 3

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog, see Omnibus Courses, page 56.

## Department of Military Science

### Army ROTC

[www.asu.edu/clas/military](http://www.asu.edu/clas/military)

480 965-3318

TCB 104

**Lt. Col. Scott Crawford, Chair**

**Professor:** Crawford

**Assistant Professors:** Beattie, Fischer, Hopkins, Romans, Rudolph, Warner

**Instructors:** Fox, Odroyd, Rongenoidus, Robinson

**Clinical Associate Professor:** Cox

### 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

Literacy and critical inquiry MA in thematic studies CS computer statistics qualitative application HU humanistic and fine arts SB social and behavioral sciences SG natural sciences general education SQ statistical science quantitative culture diversity in the United States Global health care See General Studies page 83

## COLLEGE OF LIBERAL ARTS AND SCIENCES

commissions in the Active Army (on a competitive basis), U.S. Army Reserve, or Army National Guard.

In addition to the military science curriculum, core 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 such professionally related areas as military technology; weapons procurement; national intelligence, secrecy, and counterintelligence; civil military relations; security coalitions and regional defense commitments; national, regional, and global levels of strategy; generalship skill in action, deterrence dynamics and structure; military doctrine; service branch livelihood, appropriate rivalry, and interservice cooperation, personnel recruitment, morale, training, advancement, and bureaucratic organization; military reform, threat and threat perception; military historical experience and analogy; media and biographical insights; the rationale and matrices of security analysis and research; and independently selectable topics.

The department also fields an independent but parallel set of 400-level courses in the areas of geostrategic, politico-strategic, and national defense policy and analysis available to students irrespective of Reserve Officers' Training Corps ROTC status, departmental major, or college affiliation for assigned credit toward General Studies, social science, and global awareness requirements for graduation.

See "Classification of Courses," page 55, for a description of course 499 Individualized Instruction.

### 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.** Any student who is enrolled in ASU or approved by the professor of military science may participate in military science advanced classes. However, to be fully 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, 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 advanced summer camp 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, 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 status. This program is open to all students with the exception of three- and four-year Army ROTC scholarship winners (see "Scholarship Programs," page 431). Students seeking enrollment in the two-year program should make application during the spring semester of the calendar year in which they desire to enter the program. They must provide SAT/ACT scores and pass the Army physical fitness test. After successfully completing a paid five-week basic camp, 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 basic summer camp or prior military service,
2. score at least 950 on SAT or 19 on ACT,
3. passing the Army physical examination,
4. achieving and maintaining the minimum cumulative GPA required for graduation in the student's selected major, but no less than 2.00;
5. attainment of at least junior class standing; and
6. 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 six week advanced camp. 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 basic camp 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 about \$1,500 tax free for each of these two years.

**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 more than \$1,250 for each semester's involvement.

**Scholarship Programs.** The Army ROTC offers scholarship programs for outstanding young men and women who are motivated toward a career as professional officers in the U.S. Army. These scholarships are awarded in varying amounts for tuition. In addition, the scholarship pays \$150.00 per month subsistence allowance and \$225.00 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. Selection is made on a nationwide basis. 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)

*fa*

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*

Introduction to problem solving methods, critical thinking decisions making and group dynamics as applied in a military environment. 3 hours lecture conference 2 hours lab Prerequisite: MIS 101

#### MIS 201 Introduction to Leadership Dynamics I. (3)

*fa*

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 ROTC Basic Camp. (4)

*summer*

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

#### MIS 301 Advanced Military Science I. (3)

*fa*

Theory and dynamics of the individual soldier and military units in offensive combat operations. 2 hours lecture conference 1.5 hours of Leadership Practical Application, 1 2 day field exercise, 3 1 day field exercises. Fee Prerequisites: MIS 101 and 102 and 201 and 202 or the requirements Corequisite: EPE 105 Physical Education Activity Army Master Fitness

#### MIS 302 Advanced Military Science II. (3)

*spring*

Theory and dynamics of military units in defensive combat operations. 2 hours lecture conference, 1.5 hours Leadership Practical Application, 1 3 day field exercise, 2 1 day field exercises. Fee Prerequisites: MIS 101 and 102 and 201 and 202 or the requirements Corequisite: EPE 105 Physical Education Activity Army Master Fitness

#### MIS 303 ROTC Advanced Camp. (4)

*summer*

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

#### MIS 401 Advanced Military Science III. (3)

*fa*

Military organization preparation and conduct of military training leadership development, ethics and professional development of the military officer. 3 hours lecture conference 2 hours Leadership Practical Application, 1 2 day field exercise, 3 1 day field exercises. Fee Prerequisites: MIS 301 302 Corequisite: EPE 105 Physical Education Activity Army Master Fitness

#### MIS 402 Advanced Military Science IV. (3)

*spring*

Military correspondence career planning and professional service conduct of training leadership development ethics and professional development of the military officer. 3 hours lecture 2 hours Leadership Practical Application, 3 day field exercise, 2 1 day field exercises. Fee Prerequisites: MIS 301 302 Corequisite: EPE 105 Physical Education Activity Army Master Fitness

#### MIS 410 American Defense Policy I. (3)

*fa*

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 format and implementation of U.S. national security. Prerequisite: MIS 410 *General Studies SB*

Literacy and critical inquiry **MA** mathematics **CS** computer literacy quantitative preparation **HU** humanities and fine arts **SB** social and behavioral sciences **SG** natural and physical sciences **SQ** natural and quantitative **C** cultural diversity in the United States **Gg** global **H** history. See *General Studies* page 83

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MIS 414 Comparative Defense Policy Analysis. (3)

*fall*  
Historical problems and analytical issues in the evolution of organizational application, and content of effective military establishments various political systems  
*General Studies SB*

MIS 416 Soviet/C.I.S. Foreign and Defense Policies. (3)

*spring*  
Analyzes foreign and security policies of the Soviet Union on COMSEC and of the success or states to the Warsaw Pact  
*General Studies SB*

MIS 499 Individualized Instruction: National Defense Analysis (1-3)

*selected semesters*

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog see Omnibus Courses page 56

**Molecular and Cellular Biology**

lsu1.la.asu.edu mcb  
480 965-0743  
LSE 411

**Bertram L. Jacobs, Director, Interdisciplinary Committee**

**GRADUATE PROGRAMS**

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 four core departments (the Department of Biology, Chemistry and Biochemistry, Microbiology and Plant Biology), with additional faculty from the Departments of Anthropology and Physics and Astronomy.

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

**MOLECULAR AND CELLULAR BIOLOGY (MCB)**

See the *Graduate Catalog* for the MCB courses.

**Molecular Biosciences and Biotechnology**

lifesciences.asu.edu mbb

**Department of Plant Biology**

480 965-3414

LSE 218

**Department of Microbiology**

480 965-1457

LSE 210

J. Kenneth Hooper, Chair  
Edward A. Birge, Codirector

**MOLECULAR BIOSCIENCES AND BIOTECHNOLOGY—B.S.**

The interdepartmental 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 Departments of Plant Biology and Microbiology, with additional participation by the Departments of Biology and Chemistry and Biochemistry.

**General Program**

The B.S. degree program consists of a minimum of 54 semester hours of course work in required courses plus two courses in mathematics specifically designed for this program. The required major courses (22 total semester hours) are as follows:

MBB 245 Cellular and Molecular Biology SQ	3
MBB 246 Cellular and Molecular Biology Laboratory SQ	1
MBB 343 Genetic Engineering and Society L	4
MBB 484 Internship	6
or MBB 499 Individualized Instruction 6	6
MBB 493 Capstone: Issues in Biotechnology	4
MIC 206 Microbiology Laboratory SG	1
MIC 220 Biology of Microorganisms	3
<b>Total</b>	<b>22</b>

Both MIC 205 and 206 must be taken for SC credit

Choose two or more of the following courses or combinations for a total of seven to nine semester hours

BIO 334 General Genetics	4
BIO 353 Cell Biology	3
BIO 494 ST Cell Biotechnology	4
MBB 350 Applied Genetics	4
MBB 445 Techniques in Molecular Biology Genetics	3
MBB 446 Techniques in Molecular Biology Genetics Lab	3
MIC 420 Immunology Molecular and Cellular Foundations	3

MIC 421 Experimental Immunology <sup>1</sup> . . . . .	2
Total . . . . .	79

- MBB 446 is taken with 445
- MIC 421 is taken with 420

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

BCH 361 Principles of Biochemistry . . . . .	3
BCH 367 Elementary Biochemistry Laboratory . . . . .	1
CHM 113 General Chemistry SQ . . . . .	4
CHM 113 General Chemistry with Qualitative Analysis SQ . . . . .	3
CHM 231 Elementary Organic Chemistry SQ <sup>1</sup> . . . . .	3
CHM 233 Elementary Organic Chemistry Laboratory SQ . . . . .	1
MAT 251 Calculus for Life Sciences MA . . . . .	3
PHY 111 General Physics SQ <sup>2</sup> . . . . .	3
PHY 112 General Physics SQ . . . . .	3
PHY 113 General Physics Laboratory SQ . . . . .	1
PHY 114 General Physics Laboratory SQ <sup>3</sup> . . . . .	1
Total . . . . .	28

<sup>1</sup> Both CHM 231 and 233 must be taken to secure SQ credit.  
<sup>2</sup> Both PHY 111 and 113 must be taken to secure SQ credit.  
<sup>3</sup> 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 331 Mathematical Methods for Genetic Analysis 3, in which a minimum of "C" is required.

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

**MOLECULAR BIOSCIENCES BIOTECHNOLOGY (MBB)**

**MBB 245 Cellular and Molecular Biology. (3)**

*fa 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 1 credit a so earned in MBB 245*

**MBB 246 Cellular and Molecular Biology Laboratory. (1)**

*fa 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 1 credit a so earned in MBB 245*

**MBB 343 Genetic Engineering and Society. (4)**

*fa*  
 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 awarded for only BIO 343 or MBB 343. 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 genetic principles to biological questions and engineering organisms in biotechnology. 2 hours lecture, 6 hours lab. Cross listed as PLB 350. Credit is awarded 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)**

*fa and spring*  
 Molecular genetic principles: plasmid construction, purification and characterization, PCR mutagenesis, hybridization and sequence

analysis, protein quantitation, immunologic detection and electrophoresis. Cross listed as M/C 445. Credit is awarded for only MBB 445 or M/C 445. Prerequisites: both BIO 340 and MIC 302 or only instructor approval.

**MBB 446 Techniques in Molecular Biology Genetics Lab. (2)**

*fa and spring*  
 Molecular genetic techniques: plasmid construction, purification and characterization, PCR mutagenesis, hybridization and sequence analysis, protein quantitation, immunologic detection and electrophoresis. Cross listed as MIC 446. Credit is awarded for only MBB 446 or M/C 446. Prerequisite: MBB 445 or M/C 445.

**MBB 484 Internship. (3)**

*selected semesters*

**MBB 490 Capstone. Issues in Biotechnology. (2)**

*fa and spring*  
 Integrates science and humanities with problem solving exercises dealing with intellectual property, ethics, regulatory issues, business practices and commercialization. Prerequisite: Molecular Biosciences Biotechnology major or instructor approval.  
*General Studies*

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

*selected semesters*

**Omnibus Courses.** For an examination of courses offered but not specifically listed in this catalog, see Omnibus Courses, page 56.

**Department of Philosophy**

www.asu.edu/philosophy

480 965-3394

PS A524

**Brad Armendt, Chair**

**Regents Professor:** Maenschen, Murphy

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

**Associate Professors:** Armendt, Backson, de Marneffe, Guesser, Kobes, McGregor, Reynolds

**Assistant Professor:** Devlin

**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 HL H . . . . .	3
PHI 302 History of Modern Philosophy HL H . . . . .	3

L: language and culture MA: mathematics CS: computer statistics qualitative applications HU: humanities and diet SB: social and behavioral sciences SG: natural and general education core course SQ: natural and quantitative Cultural diversity in the United States Global history/career See General Studies page 83

## COLLEGE OF LIBERAL ARTS AND SCIENCES

PHI 305 Ethical Theory <i>HU</i> . . . . .	3
or PHI 335 History of Ethics <i>HU</i> . . . . .	
PHI 312 Theory of Knowledge <i>HU</i> . . . . .	3
or PHI 314 Philosophy of Science <i>HU</i> 3 . . . . .	
PHI 316 Metaphysics <i>HU</i> . . . . .	3
or PHI 317 Philosophy of Mind <i>HU</i> 3 . . . . .	
PHI 333 Introduction to Symbolic Logic . . . . .	3
Choose two courses below . . . . .	6
PHI 401 Rationalism 3 . . . . .	
PHI 402 Empiricism <i>HU</i> 3 . . . . .	
PHI 403 Contemporary Analytical Philosophy <i>HU</i> 3 . . . . .	
PHI 403 Advanced Symbolic Logic 3 . . . . .	
PHI 42 Topics in Philosophy 3 . . . . .	
PHI 494 Special Topics 3 . . . . .	

Tota . . . . .

Exceptions by special permission of the chair on v. 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" is necessary for each course used to fulfill the major requirements. See "College Degree Requirements," page 330

**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."

### 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."

### CERTIFICATE IN HISTORY AND PHILOSOPHY OF SCIENCE

The History and Philosophy of Science Certificate consists of 18 semester hours, of which at least 12 must be in the upper division and approved by an advisor in the department. At least nine semester hours must be HPS, and three semester hours must be PHI 314 Philosophy of Science. All courses must be passed with a minimum grade of "C."

### 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 between 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 courses must be passed with a minimum grade of "C."

## 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.

### HISTORY AND PHILOSOPHY OF SCIENCE (HPS)

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

*selected semesters*

Examines scientific, mythic and religious ideas relating to origins of our human. Paleontological and scientific creationism in American culture. Lecture/discussion. Cross-listed as B O 344 HUM 311 REL 383. Credit is allowed for only B O 344 or HPS 311 or HUM 311 or REL 383

#### HPS 322 History of Science. (3)

*once a year*

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

*General Studies H 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, adaptive theory. Cross-listed as B O 316. Credit is allowed for only B O 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 applications on treatment, and the emerging institution of a profession of medical practice. Cross-listed as B O 318. Credit is allowed for only B O 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 the impact on 19th and 20th century thought. Lecture/discussion. Cross-listed as B O 346 HUM 372. Credit is allowed for only B O 346 or HPS 332 or HUM 372

#### HPS 340 Biology and Society. (3)

*spring*

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

**HPS 377 Nature in Context. (3)***fa*

Explores perspectives on the nature of nature, the history of ecology and the use of environmentalism. Seminar. Cross-listed as HON 377. Credits awarded for only HON 377 or HPS 377.

**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: understanding.

**HPS 410 Professional Values in Science. (3)***once a year*

Considers issues related to values in science such as collaboration, finances, legal issues, medical, mentorship of ideas, scientific integrity. Discusses student projects. Cross-listed as BO 416. Credits awarded for only BO 416 or HPS 410.

*Genera Studes L*

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in the catalog, see Omnibus Courses, page 56.

**PHILOSOPHY (PHI)****PHI 101 Introduction to Philosophy (3)***fa, spring, summer*

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

*Genera Studes HU***PHI 103 Principles of Sound Reasoning. (3)***fa, spring, summer*

Familiarizes with validity and soundness of arguments. May include syllogistic, elementary symbolic, inductive, and scientific methods. Prerequisite: ENG 101 or 105.

*Genera Studes 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?

*Genera Studes 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.

*Genera Studes L***PHI 301 History of Ancient Philosophy. (3)***fa*

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

*Genera Studes H HU***PHI 302 History of Modern Philosophy. (3)***spring*

History of Western philosophy from the Renaissance through Kant.

*Genera Studes 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.

*Genera Studes 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 377 or 309 or 335, instructor approval.

*Genera Studes HU***PHI 306 Applied Ethics. (3)***fa, spring, summer*

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

*Genera Studes 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, liberty and responsibility, punishment, judicial reasoning, justice, property and differences between theories of natural and positive law.

*Genera Studes 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 relativism in art criticism.

*Genera Studes 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, a distributive justice, and order. Prerequisite: PHI 105 or 305 or 335, or instructor approval.

*Genera Studes 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, and dualism, biocentrism.

*Genera Studes 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 perception, relation to the world and other people.

*Genera Studes 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 173 or 373 or 301 or 302 or 333.

*Genera Studes HU***PHI 314 Philosophy of Science. (3)***once a year*

Structure and justification of scientific theories, explanation, and the object range. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.

*Genera Studes HU***PHI 315 Philosophy of Language. (3)***once a year*

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

*Genera Studes HU***PHI 316 Metaphysics. (3)***once a year*

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

*Genera Studes HU***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 372 or 333.

*Genera Studes HU***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 372 or 333.

*Genera Studes HU*

Literacy and literacy inquiry MA mathematics CS computer statistics quantitative approach HU humanities and fine arts SB a and behavioral science engineering and computer science SQ natural and quantitative scientific rationality in the field of statistics G glob  
History. See General Studies, page 8.

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### 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 for 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 and discussion.  
*General Studies CS HU*

### PHI 325 Philosophy of Social Science. (3)

*selected semesters*

Philosophical problems surrounding the aims, structure, and method of the social sciences.  
*General Studies HU SB*

### PHI 332 19th-Century Philosophy. (3)

*selected semesters*

History of 19th-century philosophy. Philosophical thought emphasizing either the German or the British traditions. Prerequisite: PH 302.  
*General Studies HU*

### PHI 333 Introduction to Symbolic Logic. (3)

*once a year*

Symbolic techniques emphasizing deductions and proofs in the propositional and first-order predicate calculus.

### 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: PH 101 or 105 or 305 or 306 or 307 or 309 or instructor approval.  
*General Studies H*

### PHI 401 Rationalism. (3)

*selected semester*

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

### PHI 402 Empiricism. (3)

*selected semesters*

Examines representatives of either classical or contemporary philosophy such as empiricism, e.g., Bacon, Hobbes, Locke, Butler, Berkeley, Reid, Hume, Mill, Carnap, and Ayer. Prerequisites: PH 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: PH 302 and 312 or 314 or 315 or 316 or 317 or 401 or 402.

*General Studies H*

### PHI 413 Advanced Symbolic Logic. (3)

*selected semesters*

Properties of formal systems axiomatizing propositional and first-order predicate logic. May also include modal logic, number theory, and models of logic. Prerequisite: PH 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: relevant upper division PH course or instructor approval.

### PHI 494 Special Topics. (3)

*selected semesters*

### PHI 590 Reading and Conference. (1-12)

*selected semesters*

### PHI 591 Seminar. (1-12)

*once a year*

Topic may include the following:

- Aesthetics 1-3
- Epistemology 1-3
- Ethics 1-3
- History of Philosophy 1-3
- Logic 1-3
- Metaphysics 1-3
- Philosophy of Language 1-3
- Philosophy of Law 1-3
- Philosophy of Science 1-3
- Social and Political Philosophy 1-3

Prerequisite: Philosophy graduate student or instructor approval.

### PHI 592 Research. (1-15)

*selected semester*

### PHI 599 Thesis. (1-12)

*final and progress*

### PHI 790 Reading and Conference. (1-12)

*selected semesters*

### PHI 792 Research. (1-15)

*selected semesters*

### PHI 799 Dissertation. (1-15)

*selected semesters*

**Omnibus Courses.** For an explanation of courses offered but not specifically stated in this catalog, see Omnibus Courses, page 56.

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## Department of Physics and Astronomy

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Barry G. Ritchie, Chair

**Regents' Professors:** Smith, Spence, Starr, Fed

**Professors:** Aaron, Bauer, Bennett, Burstein, Chamberlain, Comfort, Cowey, Doak, Dow, Hester, Kaufmann, Lindsay, Menendez, Page, Ponce, Rez, Ritchie, Sankey, Scheffelin, Schmidt, Terry, Tsen, Tsong, Venables, Windhorst, Wyckoff

**Associate Professors:** Aannestad, Cuibertson, Drucker, Herbots, Marzke

**Assistant Professors:** Lebed, Shumway

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## 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 15 Physics SQ 4

PHY 21 University Physics I Mechanics SQ 3

PHY 22 University Physics Laboratory I SQ

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

PHY 15 Physics II SQ 4

PHY 131 University Physics II Electricity and Magnetism SQ 3

PHY 132 University Physics Laboratory II SQ 1

PHY 201 Mathematical Methods in Physics I . . . . . 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 . . . . . 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 . . . . . 45

- <sup>1</sup> Both PHY 121 and 122 must be taken to secure SQ credit
- <sup>2</sup> 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

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

PHY 121 University Physics I Mechanics SQ<sup>1</sup> 3

PHY 122 University Physics Laboratory I SQ 1

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

PHY 151 Physics II SQ 4

PHY 131 University Physics II. Electricity and Magnetism SQ 3

PHY 132 University Physics Laboratory II SQ 1

PHY 201 Mathematical Methods in Physics I . . . . . 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 . . . . . 2

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

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

Total . . . . . 40

- <sup>1</sup> Both PHY 121 and 122 must be taken to secure SQ credit
- <sup>2</sup> 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, scientific 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

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 32 Introduction to Planetary and Stellar Astrophysics SQ<sup>1</sup> . . . . . 3

AST 322 Introduction to Galactic and Extragalactic Astrophysics SQ<sup>2</sup> . . . . . 3

AST 421 Astrophysics I . . . . . 3

AST 422 Astrophysics II . . . . . 3

AST 499 Individualized Instruction . . . . . 3

Total . . . . . 15

- <sup>1</sup> Both AST 113 and 321 must be taken to secure SQ credit.
- <sup>2</sup> 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 SQ<sup>1</sup> . . . . . 3

AST 114 Astronomy Laboratory II SQ<sup>2</sup> . . . . . 3

AST 321 Introduction to Planetary and Stellar Astrophysics SQ<sup>1</sup> . . . . . 3

AST 322 Introduction to Galactic and Extragalactic Astrophysics SQ<sup>2</sup> . . . . . 3

L liberal arts and critical inquiry MA mathematics CS computer statistics quantitative applications HU humane and fine arts SB social and behavioral science SG natural science—general core core SQ natural science—quantitative C cultural diversity in the United States G global health care See "General Studies" page 83

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

PHY 150 Physics I SQ 4

PHY 121 University Physics I: Mechanics SQ<sup>3</sup>

PHY 122 University Physics Laboratory I SQ<sup>3</sup> 1

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

PHY 151 Physics II SQ 4

PHY 131 University Physics II: Electricity and Magnetism SQ<sup>4</sup> 3

PHY 132 University Physics Laboratory II SQ<sup>4</sup> 1

PHY 252 Physics III SQ . . . . . 4

Approved upper division electives . . . . . 4

Total . . . . . 24

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

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

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

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

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 SQ 4

PHY 121 University Physics I: Mechanics SQ 3

PHY 122 University Physics Laboratory I SQ 1

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

PHY 151 Physics II SQ 4

PHY 131 University Physics II: Electricity and Magnetism SQ 3

PHY 132 University Physics Laboratory II SQ<sup>3</sup> 1

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

Approved electives . . . . . 3

Total . . . . . 29

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

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

**SECONDARY EDUCATION—B.A.E.**

**Physics.** Two options are available for physics as the major teaching field.

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

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

PHY 150 Physics I SQ<sup>1</sup> (4)

PHY 121 University Physics I: Mechanics SQ<sup>2</sup> 3

PHY 122 University Physics Laboratory I SQ<sup>2</sup> 1

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

PHY 151 Physics II SQ<sup>1</sup> (4)

PHY 131 University Physics II: Electricity and Magnetism SQ<sup>3</sup> 3

PHY 132 University Physics Laboratory II SQ<sup>3</sup> 1

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

PHY 252 Physics III SQ<sup>1</sup> . . . . . 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 333 Electronic Circuits and Measurements . . . . . 3

PHY 361 Introductory Modern Physics . . . . . 3

or PHY 314 Quantum Physics I 3)

PHY 483 Methods of Teaching Physics . . . . . 3

or PHY 484 Internship: Physics Teaching 1-4

Approved electives . . . . . 10

Total . . . . . 42

PHY 101, 102, 113, and 114 or equivalents may be substituted for PHY 150, 151, and 252 with approval of the advisor

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

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

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

*Option Two* Option two consists of 32 semester hours in physics and an additional 30 semester hours in chemistry (see "Minor in Chemistry," page 360) or mathematics (see "Minors in Mathematics and statistics," page 420). The physics portion of this program requires the following courses:

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

PHY 150 Physics I SQ<sup>1</sup> (4)

PHY 121 University Physics I: Mechanics SQ<sup>2</sup> 3

PHY 122 University Physics Laboratory I SQ<sup>2</sup> 1

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

PHY 151 Physics II SQ<sup>1</sup> (4)

PHY 131 University Physics II: Electricity and Magnetism SQ 3

PHY 132 University Physics Laboratory II SQ<sup>3</sup> 1

PHY 201 Mathematical Methods in Physics I<sup>4</sup> . . . . . 3

PHY 252 Physics III SQ<sup>1</sup> . . . . . 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 333 Electronic Circuits and Measurements . . . . . 3

PHY 361 Introductory Modern Physics . . . . . 3

or PHY 314 Quantum Physics I 3)

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PHY 480 Methods of Teaching Physics	3
or PHY 484 Internship Physics Teaching 1-4	
Total	32

- <sup>1</sup> PHY 111, 112, 113, and 114 or equivalents may be substituted for PHY 151, 151, and 252 with approval of the advisor
- <sup>2</sup> Both PHY 121 and 122 must be taken to secure SQ credit
- <sup>3</sup> Both PHY 131 and 132 must be taken to secure SQ credit
- <sup>4</sup> Physics/Math option MAT 274 plus MAT 342 may be substituted for PHY 201  
Physics Chemistry option CHM 480 may be substituted for PHY 480

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

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

- PHY 111, 112, 113, and 114 may be substituted for PHY 151, 151, and 252, or equivalents, with approval of the advisor
  - <sup>2</sup> Both PHY 121 and 122 must be taken to secure SQ credit
  - <sup>3</sup> Both PHY 131 and 132 must be taken to secure SQ credit
- The remaining hours are selected from upper division courses in physics or astronomy (including AST 113 and 114), subject to 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 credit a so earned n 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 credit a so earned n 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-requisites AST 111 or 321 a working knowledge of high school algebra and geometry  
*General Studies SQ credit a so earned n 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-requisites AST 112 or 322 a working knowledge of high school algebra and geometry  
*General Studies SQ credit a so earned n AST 112 or 322*
  - AST 321 Introduction to Planetary and Stellar Astrophysics. (3)**  
*fall*  
Physics celestial mechanics, properties of planets the sun, and other stars formation and evolution of stars and planetary system Pre-requisites MA 270 or 29 PHY 15  
*General Studies SQ credit a so earned n 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 AS 321 or instructor approval  
*General Studies SQ credit a so earned n 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 AS 421 but different perspective topics are emphasized a given year Prerequisites AST 321 322 PHY 311 314
  - AST 499 Individualized Instruction. (3)**  
*selected semesters*
  - AST 598 Special Topics. (1-4)**  
*selected semesters*  
Topics may include the following
    - Astronomical Data Taking and Data Reduction
    - Cosmology and High Energy Astrophysics
    - Extragalactic Astronomy
    - Galactic Structure
    - Interstellar Medium and Gaseous Astrophysics
    - Stellar Interiors and Stellar Evolution
- Omnibus Courses.** For an explanation of courses offered but not specifically stated in this catalog, see Omnibus Courses page 56

**PHYSICAL SCIENCES (PHS)**

- PHS 110 Fundamentals of Physical Science. (4)**  
*fall and spring*  
One semester survey of the principles of physics and chemistry Pre-requisites 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 education Lecture lab Cross-listed as STE 208 Credits allowed for only PHS 208 or STE 208 Fee Prerequisite a college level course in science or instructor approval  
*General Studies SQ*
- Literary and critical inquiry MA mathematics CS computer statistics quantitative application HU humanities and the arts SB social and behavioral science SG natural science-geography or earth science SQ literature quantitative education diversity in the United States Global history See General Catalog page 8

## COLLEGE OF LIBERAL ARTS AND SCIENCES

### PHS 484 Physical Science Internship. (3)

*fa and spr g*

App e s ent f c concepts d s ussed a d demon trated n PHS 208 to teach m dd e schoo students Focuses on hands on exper ence

### PHS 505 Energy and the Environment (3)

*summer*

Current prob ems n energy resources product o o sumption and conservat on Stud o Prerequ te nstru to ap rova

### PHS 510 Inquiry Physical Science I. (3)

*summer*

nqu ry approach to phys ca sc ence tandards based te ded fo e elementary choo teachers Top cs se ected. k nemat c dynam cs. e e tr c ty magnet sm ght astron my Stud o Prerequ ste nstr ct or approval

### PHS 520 Inquiry Physical Science II. (3)

*summer*

nqu ry appr ach to p ys cs and astronomy standards based nte ded fo m dd e schoo teachers Emphas ze te h oogy and mode ng Stud o Prerequ ste nstructor appr va

### PHS 530 Methods of Physics Teaching I (3)

*summer*

nqu ry approach to h gh schoo phys cs teach ng Stud o Prereq ste nstructor approva

### PHS 531 Methods of Physics Teaching II. (3)

*summer*

Extens on f mode ng techn ques ntrodu ed n PHY 580 Stud o Prerequ ste PHS 530 or nstructor a pr va

### PHS 534 Methods of Teaching Physical Science I, II, III. (3)

*summer*

Des gn of curr cu um and conduct of nstru ct o for phy ca ence courses St d Prerequ te n tructor approva

### PHS 540 Integrated Physics and Chemistry. (3)

*summer*

C ab rat ve nqu ry methods for teach ng and coord nating phys cs and chem stry Stud o Prerequ ste CHM 480 r PHS 53 or PHY 480 or nstru ct o approva

### PHS 542 Integrated Mathematics and Physics. (3)

*summer*

Mathemat ca m de s and m de ng as an integrat g theme for sec ondary mathemat cs and phys cs Stud o Prerequ ste nstructor approva

### PHS 550 Physics and Astronomy. (3)

*summer*

A tr nomy curr c a and pr jects for secondary schoo w th emphas s on the ro e of phys cs n astronomy Stud o Prerequ ste n tructor approva

### PHS 556 Astrophysics. (3)

*summer*

Struct re and ev ut on of star ga axes and the u verse For sec ondary schoo teachers Stud o Prerequ ste nst u tor approva

### PHS 560 Matter and Light. (3)

*summer*

nteract ons f g t w th matter Lasers and spe tro copy Stud o Pre requ ste n tructor approva

### PHS 564 Light and Electron Optics. (3)

*summer*

Pr n pes and pract ce of e lectron opt a struments Stud o Prerequ ste tru tor approva

### PHS 570 Spacetime Physics. (3)

*summer*

Spec a and genera theor es of re at v ty w th mp cat ons for spa e and t me trave Stud o Prerequ ste nstructor approva

### PHS 581 Structure of Matter and Its Properties. (3)

*summer*

Mode s of matte and ts propert es Stud o Prerequ ste nstructor approva

**Omnibus Courses.** For an exp anat on of courses offered but n t spe f a y ted n thl cata og see Omnbus Cour es, page 56

## PHYSICS (PHY)

### PHY 101 Introduction to Physics (4)

*fa and spr ng*

Emphas zes app cat ons of phys cs to fe n the modern wor d Pre sumes understand ng of elementary algebra 3 hours e ture 1 rec ta ton 2 hours ab

*Genera Stud es SQ*

### PHY 105 Basic Physics. (3)

*fa*

One semester survey f the pr ncp es of phys cs P mar y fo stu dents who tend to take PHY 121 131 but have ot taken h gh choo pl y cs 3 hours e ture 1 re tat on Prereq ste s a geba and tr go nometry

### PHY 111 General Physics. (3)

*fa spr ng summer*

Nonca cu us treatment of the pr npe of phys cs fo nonp ys s ma ors St de ts whose curr cu a requ re a abo atory course mu t a o reg ste for PHY 113 3 h ur e ture 1 re tat on Prerequ te t gonometry

*Genera Stud es SQ f cred t a so ear ed n PHY 113*

### PHY 112 General Physics. (3)

*fa spr ng summer*

Cont nuat on f PHY 111 Students who e curr cu a requ re abo ra tory course must a so reg ste for PHY 114 Pre equ ste PHY 111

*Genera Stud es SQ f cred t a so arned n PHY 114*

### PHY 113 General Physics Laboratory. (1)

*fa spr ng summer*

E elementary exper ment p ys cs Requ res outs de preparat n fo exper ments and report wr tng May e taken concu rent y w th or subsequent to PHY 111 2 hours ab

*Genera Stud es SQ f cred t a so ear ed n PHY 111*

### PHY 114 General Physics Laboratory. (1)

*fa spr ng summer*

See PHY 113 May be taken concurrent y w th or s bsequent to PHY 112

*Ge era Stud es SQ f cred t a so arned n PHY 112*

### PHY 121 University Physics I: Mechanics. (3)

*fa spr ng summer*

K nemat s Newton' aws w k e ergy m me tum onservat on aws dynam cs of part ces o ds and f ds 3 hours e t re 1 hour rec ta ton Prerequ ste MAT 270 r 290 o nstructor appr va

*Genera St des SQ f cred t a so ear ed n PHY 122*

### PHY 122 University Physics Laboratory I. (1)

*fa sp ng ummer*

Lab a company ng PHY 121 Pre r corequ ste PHY 121

*Genera Stud es SQ f cred t a so ea ned n PHY 121*

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

*fa spr ng summer*

E lectrc charge and current e e tr c and magnet c fe d n va uum and n mater a s and ndu ct on A rcrcu ts dspacemnt cur ent and e lectromagnet c waves 3 hour e ture 1 hour rec ta ton Prerequ ste s MAT 271 or 291 or nstructor approva PHY 121 Corequ ste MAT 272 or nstructor app va

*Genera Stud es SQ f cred t a so ear ed n PHY 132*

### PHY 132 University Physics Laboratory II. (1)

*sp g and summer*

Lab a company ng PHY 131 Pre or orequ ste PHY 131

*Genera Stud es SQ f cred t a so ear ed n PHY 131*

### PHY 150 Physics I. (4)

*pr ng*

ntrodu tory phys cs for majors K nemat cs Newton s Laws bas c force energy momentum spec a re at v ty 3 hours e ture 3 hours ab Prerequ ste MAT 27 or 29 or ts equ va ent

*Genera Stud es SQ*

### PHY 151 Physics II. (4)

*fa*

Cont nuat on of PHY 15 E lectr magnet c fe ds Ampere s and Fa a day s Laws Maxwe s equat on bas cc cut e ements 3 hours e ture 3 hours ab P erequ te MAT 271 or 291 or ts equ va ent PHY 121 122 or 150

*Genera Stud es SQ*

## DEPARTMENT OF PHYSICS AND ASTRONOMY

### PHY 190 Seminar: Physics as a Curriculum and a Profession. (1) *fa and spring*

Seminar for new Physics majors instruction and format on curriculum departmental functions and professional preparation Weekly meeting and excursion Pass fail grading

### PHY 201 Mathematical Methods in Physics I. (3)

*spring*

Different equations near equations vectors matrices Fourier series and numerical methods 2 hours lecture 2 hours lab Prerequisite MAT 272 or its equivalent Corequisite PHY 252  
*General Studies CS*

### PHY 241 University Physics III. (3)

*fa and spring*

Thermodynamics kinetic theory physics 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 physics optics thermodynamics kinetic theory. 3 hours lecture 3 hours lab Prerequisites MAT 72 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)

*fa*

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)

*fa*

Particle kinematics mechanics conservation laws, particle motion force fields, dynamics of two body systems reference frames, rigid body motion relativity Corequisites both PHY 302 and 314 on 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, magnet induction Faraday's Law Prerequisites PHY 3 2, 310 Corequisite PHY 315 or instructor approval

### PHY 314 Quantum Physics I. (3)

*fa*

Photons modes of the atom wave properties of matter, introduction to wave mechanics 1 dimensional system 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 dimensional 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)

*fa and spring*

Basic principles of electron 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 I credit also earned in PHY 420*

### PHY 361 Introductory Modern Physics. (3)

*fa 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 II. (3)

*fa*

Electromagnetic fields of moving charge Maxwell's equations, harmonic phenomena, oscillations wave electromagnetic radiation covariant electromagnetism introduction to general relativity Prerequisites PHY 31 333 prerequisite PHY 416 or instructor approval

### PHY 416 Quantum Physics III (3)

*fa*

introduces the quantum theory of atoms molecules solids and nuclei Dirac equation Prerequisites PHY 311 315 Corequisite PHY 412 or instructor approval

### PHY 420 Research Paper. (1)

*fa and spring*

Scientific report writing summarizes a paper based on library or laboratory research or both Taken in conjunction with other course as approved Conference Prerequisite instructor approval  
*General Studies L I credit also earned in PHY 334*

### PHY 441 Statistical and Thermal Physics I. (3)

*fa*

Statistical and experimental basis of heat temperature and entropy Mechanics and statistical basis of laws of thermodynamics Application 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 adsorption solids Equilibrium of phases and chemical species Transport theory irreversible processes and fluctuation Prerequisite PHY 441

### PHY 452 Physical Optics (3)

*fa*

Principles of reflection refraction diffraction Addition topics from contemporary optics may include Fourier transform spectroscopy laser systems theory holography hour lecture 2 hours lab Prerequisites PHY 302, 311 315 Corequisite PHY 412

### PHY 462 Nuclear and Particle Physics. (3)

*spring*

Statistical properties of nuclear matter and induced radioactivity nuclear reactions nuclear models and energy levels mesons and hyperons, and interaction of photons and electrons with matter Prerequisite PHY 311 315

### PHY 465 Advanced Laboratory II. (2)

*fa 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)

*fa 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 demonstration and experiments Organization of a laboratory Designed for secondary school physics teachers Prerequisite instructor approval

### PHY 481 Solid-State Physics. (3)

*spring*

Structure elastic properties and dynamics of crystals electron motions in crystals under applied fields Prerequisites PHY 311 315

### PHY 484 Internship: Physics Teaching. (1-4)

*fa 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

Literacy and critical inquiry MA mathematics CS computer literacy qualitative application HU humanities SB social and behavioral science SG natural science—general core SQ natural resource quantitative C cultural diversity in the nation IT global history See General Studies page 83

## COLLEGE OF LIBERAL ARTS AND SCIENCES

### PHY 495 Project Research. (1-3)

*fall and spring*

Supervised project in physics or a related topic. May be repeated for credit. Prerequisite: instructor approval.

### PHY 498 Pro-Seminar. (1-7)

*selected semesters*

### PHY 501 Methods of Theoretical Physics. (3)

*fall and spring*

Provides mathematical foundation for graduate students in basic and applied physics. Covers vector spaces, operator matrices, ordinary differential equations, integral equations, and transform and special functions. May include differential topology.

### PHY 502 Methods of Theoretical Physics. (3)

*fall and spring*

Continuation of PHY 501. Prerequisite: PHY 501.

### PHY 521 Classical Mechanics. (3)

*fall*

Varies as a principle of Lagrange's and Hamilton's equations, rigid body motion, canonical formalism, Hamilton-Jacobi theory.

### PHY 523 Relativity. (3)

*selected semesters*

Special and general theories of relativity. Prerequisite: PHY 32 or instructor approval.

### PHY 531 Advanced Electricity and Magnetism. (3)

*fall*

Electrostatics and magnetostatics, potential theory, a dielectric theory of conduction, relativistic Maxwell's equations, wave equation, plane electromagnetic waves, cavity and waveguides.

### PHY 532 Electrodynamics. (3)

*spring*

Special theory of relativity, covariant formulation of electromagnetism, interactions, nonhomogeneous wave equations, Liénard-Wiechert potentials, radiation fields; interactions of charged particles and electromagnetic waves, scattering of particles. Prerequisite: both PHY 412 and 531 or instructor approval.

### PHY 541 Statistical Physics. (3)

*fall*

Probability theory and principles of statistical mechanics, evaluation of experimental data, foundations of statistical mechanics and general aspects of thermodynamics, formalism of classical theory, calculation of specific properties of bulk matter.

### PHY 551 X-Ray and Electron Diffraction. (3)

*spring*

Fresnel and Fraunhofer diffraction, integral formulation of diffraction of x-rays and neutrons by various structures, Fourier transforms, diffraction crystal structure analysis, theory and techniques of electron microscopy, diffraction of x-rays, neutron diffraction, pendulum. Prerequisite: PHY 481 or instructor approval.

### PHY 561 Nuclear Physics. (3)

*fall and spring*

Two-nucleon interaction, Cabibbo-Goldstone coefficients, nuclear forces, meson theory and energy, scattering, nuclear binding energy, nuclear modes, transition probabilities, nuclear reactions and beta decay. Prerequisite: PHY 576 or instructor approval.

### PHY 562 Nuclear Physics. (3)

*fall and spring*

Continuation of PHY 561. Prerequisite: PHY 561 or instructor approval.

### PHY 568 Elementary Particle Physics. (3)

*selected semesters*

Classification of particles, phenomenology of strong, electroweak and weak interactions, cross sections and decay rates, spin and higher symmetries, structure of reaction amplitudes. Prerequisite: PHY 577.

### PHY 569 Elementary Particle Theory. (3)

*selected semesters*

Continuation of PHY 568. Prerequisite: PHY 568.

### PHY 571 Quantum Physics. (3)

*spring*

Reviews modern physics, chemistry, mathematics, differential equations, matrix multiplication, free particle, bound state problems, examples across physics and astronomy. Prerequisites: advanced mathematics.

modern physics and linear and complex algebra and differential equations or instructor approval.

### PHY 576 Quantum Theory. (3)

*fall and spring*

Abstract approach to quantum mechanics in Hilbert space observables and their corresponding operators, eigenstates and eigenvalues, quantum dynamics, approximation methods, systems of identical particles, angular momentum and group representation theory, continuous processes in relativistic quantum theory. Prerequisite: PHY 521.

### PHY 577 Quantum Theory. (3)

*fall and spring*

Continuation of PHY 576. Prerequisite: PHY 576.

### PHY 578 Relativistic Quantum Theory. (3)

*fall and spring*

Relativistic particle equation, Klein-Gordon equation, Dirac equation, 2D quantization, theory of scattering, S-matrix, Feynman diagrams, quantum electrodynamics, renormalization procedures. Prerequisite: PHY 577.

### PHY 579 Relativistic Quantum Theory. (3)

*fall and spring*

Continuation of PHY 578. Prerequisite: PHY 578.

### PHY 580 Practicum. (1-12)

*selected semesters*

### PHY 581 Solid-State Physics. (3)

*fall*

Quantum theory of solids, band structure, phonon lattice specific heats, band structure, Fermi statistics, thermal expansion, paramagnetism, electron-phonon interactions, and scattering by lattice defects. Prerequisite: PHY 576.

### PHY 582 Solid State Physics. (3)

*spring*

Elements of transport theory, thermal conduction, electron conduction, metal mobility, semiconductor Hall effect, magnetoresistance, selected topics of interest. Prerequisite: PHY 581.

### PHY 587 Quantum Optics. (3)

*fall and spring*

Quantization of the electromagnetic field, Quantum theory of emission, photon counting, photon states, laser density operators, and time-resolved Raman scattering. Prerequisite: PHY 576.

### PHY 588 Quantum Optics. (3)

*fall and spring*

Continuation of PHY 587. Prerequisite: PHY 587.

### PHY 592 Research. (1-12)

*selected semesters*

### PHY 598 Special Topics. (1-4)

*fall and spring*

Topics may include the following:

• Quantum Mechanics 3

*spring*

• Quantum Physics 3

*spring*

### PHY 599 Thesis. (1-12)

*selected semesters*

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog, see omnibus courses page 56.

**Department of Plant Biology**

lifesciences.asu.edu plantbiology

480 965-3414

LSE 218

**J. Kenneth Hooper, Chair**

**Professors:** Arntzen, Backhaus, Frasch, Hooper, K opatek Nash Sommerfeld Trelease Vermaas, Webber, Young

**Associate Professors:** Briggs, Clark, Day Mart n P gg, Ramakrishna, Roberson Stromberg Stutz, Szarek Towi Wu

**Assistant Professors:** Rhoads Wojciechowsk

**Assistant Research Professors:** Hu, Josh , Mor Wa ms ey

**Associate Research Scientists:** B ngham, LoBrutto

**Senior Research Specialist:** Sharp

**Herbarium Curator:** Landrum

**PLANT BIOLOGY—B.S.**

The Department of Plant Biology provides four curricular options to meet the needs of students whose interests are in rapidly expanding areas within the life sciences. 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 three optional concentrations: environmental science and ecology, plant biochemistry and molecular biology, and urban horticulture.

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 four 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.

The Department of Plant Biology, in cooperation with the Department of Microbiology, also administers the B.S. degree program in Molecular Biosciences/Biotechnology. This major is for students interested in molecular and cellular biology and its application to biotechnology. For more information about this area of study, see "Molecular Biosciences and Biotechnology," page 432.

**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. Required courses are as follows.

PLB 200 Biology of Plant	SQ*	3
PLB 201 Biology of Plants Laboratory	SQ*	1
PLB 306 Plant Anatomy		4
PLB 308 Plant Physiology		4
BIO 300 Fundamentals of Ecology		3
or BIO 340 General Genetics	4	
BIO 350 Cell Biology		3
P/B 484 Internship		3
or PLB 499 Individualized Instruction	3	
<b>Total</b>		<b>21-22</b>

\* 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 supplementary courses in chemistry and mathematics are as follows: a minimum of "C" 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 combination below		4 or 6
CHM 231 Elementary Organic Chemistry	SQ*	3
CHM 235 Elementary Organic Chemistry Laboratory	SQ	1

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
<b>Total</b>		<b>6 or 70</b>

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

Courses meeting the university computer statistics quantitative applications requirement are as follows (a minimum of "C" is required for all course work):

PLB 430 Statistical Analyses in Environmental Science	CS	3
or PLB 432 Computer Applications in Biology	CS	3
or BIO 400 Biometry	CS	4

**Special Concentration Programs**

Three 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 the department 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. Required courses are as follows:

Literacy and Critical Inquiry MA, mathematical CS, computer statistics quantitative application, HU, humanities and life, SB, social and behavioral science, SG, natural science and general education, SQ, natural science quantitative, CU, undergraduate, The United States, G, global, high to college, Center Studies, page 8.

**COLLEGE OF LIBERAL ARTS AND SCIENCES**

BIO 320 Fundamentals of Ecology	3
Choose between the geology course combinations below	4
GLG 101 Introduction to Geology Physical SQ Credit	
GLC 103 Introduction to Geology Laboratory SQ Credit	1
GLG 110 Geologic Disasters and the Environment SG Credit	3
GLG 111 Geologic Disasters Laboratory SG Credit	1
GPH 111 Introduction to Physical Geology SQ Credit	4
PLB 200 Biology of Plants SQ Credit	3
PLB 201 Biology of Plants Laboratory SQ Credit	3
PLB 311 The Flora of Arizona	4
PLB 322 Environmental Science Major	3
PLB 420 Plant Ecology, Organisms and Populations	3
or PLB 421 Plant Ecology, Community and Ecosystems	3
PLB 484 Internship	3
or PLB 499 Individualized Instruction	3
<b>Total</b>	<b>24</b>

Both GLG 101 and 103 must be taken to secure SQ credit.  
 Both GLG 110 and 111 must be taken to secure SG credit.  
 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.

Required supplemental courses in chemistry and mathematics are as follows: a minimum of "C" is required for all course work:

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

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

Courses meeting the university computer statistics quantitative applications requirement are as follows: a minimum of "C" is required for all course work:

PLB 430 Statistical Analyses in Environmental Science CS	3
or PLB 432 Computer Applications in Biology CS	3
or BIO 415 Biometry CS	4
or STP 470 Introductory Applied Statistics CS	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. The required major courses are as follows:

BIO 353 Cell Biology	3
MBB 245 Cellular and Molecular Biology SQ Credit	3
MBB 246 Cellular and Molecular Biology Laboratory SQ Credit	1
PLB 308 Plant Physiology	4
PLB 355 Applied Genetics	4
PLB 444 Plant Growth and Development	3
PLB 484 Internship	3
or PLB 499 Individualized Instruction	3
<b>Total</b>	<b>21</b>

\* 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 of "C" 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
BCH 467 General Biochemistry	3
BCH 462 General Biochemistry	3
BCH 467 Analytical Biochemistry Laboratory L	3
CHM 113 General Chemistry SQ Credit	4
CHM 115 General Chemistry with Qualitative Analysis SQ Credit	5
CHM 231 Elementary Organic Chemistry SQ Credit	3
CHM 235 Elementary Organic Chemistry Laboratory SQ Credit	1
MAT 251 Calculus for Life Sciences MA	3
PHY 111 General Physics SQ Credit	3
PHY 112 General Physics SQ Credit	3
PHY 113 General Physics Laboratory SQ Credit	1
PHY 114 General Physics Laboratory SQ Credit	1
<b>Total</b>	<b>28 or 33</b>

Both CHM 231 and 235 must be taken to secure SQ credit.  
 Both PHY 111 and 113 must be taken to secure SQ credit.  
 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.

Courses meeting the university computer statistics quantitative applications requirement are as follows: a minimum of "C" is required for all course work:

BIO 406 Computer Applications in Biology CS	3
or MAT 351 Mathematical Methods for Genetic Analysis CS	3

**Urban Horticulture.** The B.S. degree in Plant Biology concentrating in urban horticulture consists of a minimum of 46 semester hours in plant biology and approved life science and physical science courses.

Required courses are as follows:

PLB 306 Plant Anatomy	4
or PLB 308 Plant Physiology	4
or BIO 320 Fundamentals of Ecology	3
PLB 200 Biology of Plants SQ Credit	3
PLB 201 Biology of Plants Laboratory SQ Credit	1
PLB 266 Plants in Cities: Introduction to Urban Horticulture SG Credit	4
PLB 362 Landscape Plants	3
PLB 364 Urban Forestry	3
PLB 366 Interiorscape	3
or PLB 372 Turf Management	3
or PLB 472 Greenhouse Nursery Management	3
PLB 370 Environmental Landscape Management	3
PLB 414 Plant Pathology L	3
PLB 484 Internship	3
PLB 498 PS Urban Horticulture	1
<b>Total</b>	<b>31-31</b>

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

**DEPARTMENT OF PLANT BIOLOGY**

The remaining hours to bring the total to 46 are selected from relevant courses in plant biology, other life sciences, and physical sciences.

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

CHM 101 Introductory Chemistry SQ	4
CHM 231 Elementary Organic Chemistry SQ*	3
CHM 235 Elementary Organic Chemistry Laboratory SQ*	1
Choose between the course combinations below	4
ERS 130 Introduction to Environmental Science SQ	4
ERS 225 Soils	
ERS 226 Soils Laboratory (1)	
MAT 251 Calculus for Life Sciences MA	3
Total	15

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

Courses meeting the university computer statistics quantitative applications requirement are as follows (a minimum of "C" is required for all course work):

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

**PLANT BIOLOGY MINOR**

The minor can be designed after the curricular options offered by the department. Variations to the minor for the plant biochemistry and molecular biology option are as 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 SQ*	3
PLB 201 Biology of Plants Laboratory SQ*	1
PLB 306 Plant Anatomy	4
or PLB 305 Plant Physiology	4
or PLB 310 The Flora of Arizona	4
Total	15

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

The remaining 12 hours are selected by the student through consultation with an academic advisor. Eight of these 12 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 305 Plant Physiology (4)	
or PLB 35 Applied Genetics(4)	
MBB 245 Cellular and Molecular Biology SQ*	3
MBB 246 Cellular and Molecular Biology Laboratory SQ*	1
Total	7-8

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

The remaining 12 to 13 hours are selected by the student through consultation with an academic advisor. Eight of these 12 to 13 hours must be in upper division courses in the life sciences or other advisor approved areas.

**GRADUATE PROGRAMS**

The faculty in the Department of Plant Biology offer programs leading to the degrees of M.S. and Ph.D. The faculty also participate in programs leading to the Master of Natural Science degree when one of the concentrations is plant biology. The department participates in the interdisciplinary program for the M.S. and Ph.D. degrees in Molecular and Cellular Biology. Other select faculty collaborate in the interdisciplinary concentration in ecology.

**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 and spring*  
Analyze the structure function interaction for plant cells and tissues and properties that emerge in whole plant. Prerequisites: high school biology and chemistry  
*General Studies SQ* *1 credit a semester earned in PLB 201*

**PLB 201 Biology of Plants Laboratory. (1)**

*fall and spring*  
Laboratory experiment to teach techniques and protocols of the scientific process reinforce concepts from lecture by asking questions and solving problems. Lab Prerequisites: high school biology and chemistry  
*General Studies SQ* *1 credit a semester earned in PLB 200*

**PLB 300 Comparative Plant Diversity. (4)**

*fall*  
Surveys major plant groups and other plant synthetic 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 on YB O 187 or its equivalent  
*General Studies SG*

**PLB 302 Plants and Civilization. (3)**

*fall*  
Plants and plant products used by people throughout the world. Cultural evolution, processing, and uses in modern life: beverages fibers foods medicines and perfumes. Prerequisites: preferably both PLB 200 and 201 or 10 or on YB O 187 or its equivalent

**PLB 304 Biology of Algae and Fungi. (3)**

*spring*  
Ecology, economics and evolutionary diversity of the algae and fungi. Traditional and modern biotechnology uses. 2 hours lecture 3 hours lab Prerequisites: preferably both PLB 200 and 201 or on YB O 187 or its equivalent

**PLB 305 Desert Annuals and Cacti. (3)**

*fall*  
Adaptive biology of desert plants. Analyzes diverse traits permitting survival in deserts: reproduction structure and phyology. Prerequisites: preferably both PLB 200 and 201 or on YB O 187 or its equivalent

Literary and critical inquiry MA mathematics CS computer statistics quantitative applications HU humane and fine arts SB social and behavioral science SG natural science general education SQ literacy science—quantitative Cultural diversity in the United States GGB Historical General Studies page 8

## COLLEGE OF LIBERAL ARTS AND SCIENCES

### PLB 306 Plant Anatomy. (4)

*fa*

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 on y B O 187 or its equivalent.

### PLB 308 Plant Physiology. (4)

*spr ng*

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 on y B O 187 or its equivalent. CHM 101 or 115 or 231.

### PLB 310 The Flora of Arizona. (4)

*spr ng*

Principles of taxonomy, identification of Arizona plants. 2 hours lecture, 6 hours lab. Fee. Prerequisites: preferably both PLB 200 and 201 or on y B O 187 or its equivalent.

### PLB 400 Lichenology. (3)

*spr g n odd years*

Chemistry, ecology, physiology, and taxonomy of lichens. 2 hours lecture, 3 hours lab. Prerequisites: preferably both PLB 200 and 201 or on y B O 187 or its equivalent.

### PLB 402 Mycology. (3)

*spr ng*

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 on y B O 187 or its equivalent or on y M C 206.

### PLB 404 Phycology. (4)

*spr ng*

Algae: both fresh water and marine forms. Emphasis on field collection and identification of representative morphological, ecological, and economic aspects of the algae. 3 hours lecture, 3 hours lab. Fee. Prerequisites: preferably both PLB 200 and 201 or on y B O 187 or its equivalent.

### PLB 407 Plant Fossils and Evolution. (4)

*spr ng n odd years*

Broad survey of plant life of the past including the structure of plants, fossils, the geologic ranges, geographic distribution, and paleoenvironment. 3 hours lecture, 3 hours lab or field trip. Prerequisite: preferably both PLB 200 and 201 or on y B O 187 or its equivalent.

### PLB 410 Angiosperm Taxonomy. (3)

*spr g*

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

### PLB 411 Trees and Shrubs of Arizona. (3)

*fa*

Identification of woody plants from desert chaparral and forest habitats in Arizona. 1 hour lecture, 3 hours lab or field trip. Prerequisites: preferably both PLB 200 and 201 or on y B O 187 or its equivalent or on y instructor approval.

### PLB 412 Cytogenetics. (3)

*selected semesters*

Chromosomal basis of inheritance. Crossed as B O 441. Credit is awarded for on y B O 441 or PLB 412. Prerequisite: B O 340.

### PLB 413 Cytogenetics Laboratory. (2)

*selected semesters*

Microscopic analysis of meiosis, mitosis, and aberrant cell division. 6 hours lab. Crossed as B O 442. Credit is awarded for on y B O 442 or PLB 413. Pre or corequisite: B O 441 or PLB 412.

### PLB 414 Plant Pathology. (3)

*spr ng*

Identification and control of botry and abiotic factors that cause common disease problems to plants. Prerequisites: preferably both PLB 200 and 201 or on y B O 187 or its equivalent or on y instructor approval.

*General Studies L*

### PLB 416 Medical Botany. (4)

*summer*

Explore plants affecting human health: modern and folk usage, medicinal plants, quality control, clinical evidence, pharmacology, and ethnopharmacology. 3 hours lecture, 3 hours lab. Prerequisites:

preferably both PLB 200 and 201 or on y B O 187 or its equivalent or on y instructor approval.

### PLB 484 Internship. (3)

*selected semesters*

### PLB 498 Pro-Seminar. (1-7)

*fa and spr ng*

Top may conduct the following:

• Plant Biology Internship 3

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

### PLB 499 Individualized Instruction. (3)

*selected semesters*

### PLB 502 Perspectives in Plant Biology. (3)

*fa*

Introduce major areas of research within the department with the goal of broadening knowledge to enable students primary research and communication. Prerequisite: instructor approval.

### PLB 583 OTS: Fieldwork in Tropical Biology. (6-8)

*spr ng and summer*

Intensive field-oriented classes with Organization for Tropical Studies OTS in Costa Rica with emphasis on research in ecology and systematics. Lecture lab fieldwork cross-listed as B O 583. Credit is awarded for on y B O 583 or PLB 583. Prerequisites: graduate standing, a course in basic ecology.

### PLB 591 Seminar. (1)

*fa and spr ng*

## Environmental Science and Ecology

### PLB 320 Environmental Science (Nonmajor). (3)

*fa*

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 B O 319. Credit is awarded for on y B O 319 or PLB 320. *General Studies G*

### PLB 322 Environmental Science (Major). (3)

*fa*

Nature of environmental and biological interaction history: a detailed 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 on y GPH 111.

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

*spr ng n odd years*

Factors and interactions on the physiology, allelopathy and organization of plants and plant populations using empirical and theoretical approaches. 2 hours lecture, 3 hours lab. Fee. Prerequisite: B O 320 or PLB 322 or its equivalent.

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

*spr ng n even years*

Plant community organization, field sampling techniques, and the structure and function of terrestrial ecosystem. Emphasis on the role of vegetation. 2 hours lecture, 3 hours lab. Fee. Prerequisite: B O 320 or PLB 322 or its equivalent.

### PLB 422 Plant Geography. (3)

*selected semesters*

Plant communities of the world and the interpretation. Emphasis on North American plant associations. Cross-listed as GPH 422. Credit is awarded for on y GPH 422 or PLB 422. Prerequisites: preferably both PLB 200 and 201 or on y B O 187 or on y GPH 111.

### PLB 430 Statistical Analyses in Environmental Science. (3)

*spr ng*

ANOVAS, 1-way classification of factorials, and partially hierarchical designs. Introductory multivariate statistics. Prerequisite: MAT 210 or its equivalent.

*General Studies CS*

### PLB 432 Computer Applications in Biology. (3)

*fa*

Computer analysis techniques in biology: emphasis on data entry, management, and analysis and graphing/porting. Employs mainframe and microcomputers. 2 hours lecture, 3 hours lab. Cross-listed as B O

4-6 Credit is awarded for on y B O 406 or PLB 432. Prerequisites: both B O 187 and MAT 117 or 210 or on y nstrutor approval  
*Genera Studes CS*

**PLB 434 Landscape Ecological Analysis and Modeling (3)**  
*spr ng n odd years*

Technica methods of landscape ecology analysis includes mathematical and statistical examination and modeling of landscape ecological patterns and processes. Prerequisites: both BIO 32 and 406 or on y PLB 432 or its equivalent

**PLB 520 Plant Structural Adaptation. (1-3)**  
*selected semesters*

Adaptive traits of leaf size, unique growth form, energy transfer efficiency: stomata architecture and water use efficiency applications of stable isotopes. Prerequisite: B O 32 or PLB 36 or 308 or its equivalent.

**PLB 522 Plant Photosynthetic Adaptation. (1-3)**  
*selected semesters*

Evolution and ecology of C4 and CAM adaptive traits improving competitive ability in natural environments, comparative physiology of desert plants. Prerequisite: PLB 308 or instructor approval

**PLB 524 Methods in Environmental Plant Physiology. (3)**  
*spr ng n odd years*

Techniques to measure and quantify microclimate and mass transfer. Supporting principles 2 hours lecture 3 hours lab. Prerequisite: B O 320 or PLB 308

**Plant Biochemistry and Molecular Biology**

**PLB 350 Applied Genetics. (4)**  
*spr ng*

Introduces molecular genetics with emphasis on application of genetic tools in solving biological questions and engineering organisms in biotechnology. 2 hours lecture 6 hours lab. Cross listed as MBB 350. Credit is awarded for on y MBB 350 or PLB 350. Fee. Prerequisites: preferably both MBB 245 and 246 or on y B O 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 B O 464. Credit is awarded for on y BIO 464 or PLB 440. Prerequisites: CHM 231 or 331, 12 hours of sciences

**PLB 444 Plant Growth and Development. (3)**  
*spr ng*

Molecular basis of development role of signal transduction pathways, gene regulation, control of organ formation, position, germination, and growth. Prerequisite: B O 353

**PLB 530 Introduction to Structural and Molecular Biology. (4)**  
*spr ng*

Structure and function of cells, proteins, membranes, and the genome, gene expression and biogenesis of structure application of computer imaging. Cross listed as CBS 530. Credit is awarded for on y CBS 530 or PLB 530. Prerequisites: one year of biology; one semester of organic chemistry

**PLB 540 Plant Biochemistry. (3)**  
*selected semesters*

Structure, function, regulation of molecular processes emphasizing processes unique to plants: carbon fixation, synthesis of storage products, pigments, and secondary metabolites. Prerequisites: both BCH 361 and PLB 308 or on y nstructor approval

**PLB 550 Plant Molecular Biology. (2)**  
*spr ng n odd years*

Biochemistry and molecular biology of plant organelles, including protein targeting, antiviral defense, and molecular design for plant improvements. Prerequisite: instructor approval

**PLB 552 Plant Genetic Engineering. (3)**  
*spr ng*

Plant transformation utilization of transgenic plants, transient gene expression assays, and applications of plant genetic engineering. Prerequisite: instructor approval

**PLB 553 Plant Genetic Engineering Laboratory. (2)**  
*spr ng*

Plant transformation utilization of transgenic plants, transient gene expression assays, and application of plant genetic engineering. 6 hours lab. Prerequisite: instructor approval

**PLB 554 Plant Biotechnology. (3)**  
*selected semesters*

Aseptic, cloning, propagation of plants and in vitro culture of cells, organs, and tissues. 2 hours lecture 3 hours lab. Prerequisite: PLB 308 or 370

**PLB 558 Molecular Mechanisms of Photosynthesis. (3)**  
*spr ng*

Structure and function of photosynthetic complexes, mechanism of energy conversion in plants, bacterial and model systems. Cross listed as BCH 568. Credit is awarded for on y BCH 568 or PLB 558. Prerequisite: instructor approval

**PLB 576 Functional Genomics. (2)**  
*spr ng*

Functional relevance of genomic sequences: DNA arrays, proteomics, analysis of genomic information for metabolic physiology of organisms. Cross listed as MCB 576. Credit is awarded for on y MCB 576 or PLB 576. Prerequisite: MA 351

**Urban Horticulture**

**PLB 260 Plants in Cities: Introduction to Urban Horticulture. (4)**  
*spr ng*

Principles and practices of horticulture emphasizing development, growth, and propagation of horticultural plants and environmental factors that affect these processes. 3 hours lecture 3 hours lab. Fee. Prerequisites: preferably both PLB 200 and 201 or 08 or on y B O 187. *Genera Studes SG*

**PLB 360 Southwest Home Horticulture. (2)**  
*fa and spr ng*

Multimedia course for nonmajor surveying contemporary topics in Southwest home horticulture including landscaping, flower and vegetable gardening, tree structure, sapling, and the soil

**PLB 362 Landscape Plants. (3)**  
*fa*

Identification, culture, and use of amenity plants in urban and campus. Fee. Prerequisite: PLB 260 or its equivalent

**PLB 363 Golf Course Landscape Plants and Design. (3)**  
*fa and spr ng*

Identification, culture, and use of plants in a golf course setting. Cross listed as AGB 367. Credit is awarded for on y AGB 367 or PLB 363. Fee

**PLB 364 Urban Forestry. (3)**  
*fa*

Establishment, care, and maintenance of ornamental trees, shrubs, and vines. Prerequisite: PLB 260 or its equivalent

**PLB 366 Interiorscape. (3)**  
*fa n even years*

Identification, culture, and use of container grown plants for interior environments. Prerequisite: PLB 260 or instructor approval

**PLB 370 Environmental Landscape Management. (3)**  
*fa*

Installation, irrigation, and maintenance of amenity plants in urban landscapes with an emphasis on integrated environmental landscape aesthetics. 2 hours lecture 3 hours lab. Fee. Prerequisite: PLB 260 or its equivalent

**PLB 372 Turf Management. (3)**  
*selected semesters*

Selection, establishment, and maintenance of turf grasses for lawn and sports areas. 2 hours lecture 3 hours lab. Prerequisite: PLB 260 or its equivalent

**PLB 472 Greenhouse Nursery Management. (3)**  
*spr ng n even years*

Greenhouse structures, environment, and nursery operation includes irrigation, nutrition, and other principles relative to container grown species. Fee. Prerequisites: ERS 130 or 225 or 226. PLB 260

Literacy and critical inquiry MA mathematics CS computer statistics quantitative application HU humane and fine art SB social and behavioral science SG natural science—general courses SQ natural science quantitative CUI diversity in the United States GG global history. See General Studies page 3

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**PLB 498 Pro-Seminar. (1-7)**

*Selected semesters*  
 Topics may include the following:  
 • Urban Horticulture

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog, see Omnibus Courses page 56

**Department of Political Science**

www.asu.edu/clas/polisci  
 480-965-6551  
 VICENT 205

**Robert L. Youngblood, Chair**

**Professors:** Bal Berman, Chaudhuri, Dagger, Jones, Kahn, Kenney, McDonough, McGowan, Simon, Walker, Youngblood

**Associate Professors:** Ashley, Crutenden, Dantico, Doty, Herrera, Keating, Matheis, Smihony, Spruyt, Warner

**Assistant Professors:** Chen, Coleman, Eman, Goren, Krutz

**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 SB	3
POS 110 Government and Politics SB	3
or POS 31 American National Government SB	3
POS 150 Comparative Government SB	3
or POS 16 Global Politics SB	3
POS 311 Empirical Political Inquiry SB	3
<b>Total</b>	<b>15</b>

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" or higher; no more than one "D" grade in a lower division course may be counted in the major. See "College Degree Requirements" page 330. 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.

The following courses are required:

POS 101 Political Ideologies SB	3
POS 110 Government and Politics SB	3
or POS 31 American National Government SB	3
POS 150 Comparative Government SB	3
or POS 16 Global Politics SB	3
POS 311 Empirical Political Inquiry SB	3
POS 401 Political Statistics CS	3
<b>Total</b>	<b>15</b>

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" or higher; no more than one "D" grade in a lower division course may be counted in the major. See "College Degree Requirements" page 330. 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 SB	3
POS 110 Government and Politics SB	3
or POS 31 American National Government SB	3
POS 150 Comparative Government SB	3
or POS 16 Global Politics SB	3
POS 220 Political Studies and Public Policy SB	3
POS 301 Empirical Political Inquiry SB	3
POS 325 Public Policy Development SB	3
POS 401 Political Statistics CS	3
POS 426 Elements of Public Policy SB	3
POS 484 Internship	-6
POS 484 Internship	6-9
Electives <sup>3</sup>	12

<sup>3</sup> Approved by the political science internship coordinator

Add total POS elective courses are required

<sup>3</sup> In closely related fields, approved by the 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 those engaged as activists 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 SB	3
POS 110 Government and Politics SB	3
or POS 31 American National Government SB	3

DEPARTMENT OF POLITICAL SCIENCE

POS 150 Comparative Government SB, G 3	3
or POS 160 Global Politics SB, G 3	
POS 270 Political Issues and Public Policy SB 3	3
or POS 325 Public Policy Development SB 3	
or POS 426 Elements of Public Policy SB 3	
POS 301 Empirical Political Inquiry SB 3	3
POS 333 The Congress SB 3	3
POS 333 Interest Groups SB 3	3
POS 4 Political Statistics CS 3	3
POS 484 Internship 1-6	1-6
POS electives 6-9	6-9
Electives <sup>2</sup> 12	12

<sup>1</sup> As approved by the Political Science internship coordinator.

<sup>2</sup> Additional POS elective courses are required.

<sup>3</sup> 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 SB 3	
POS 310 American National Government SB 3	
Choose two or three from the courses below 6 or 9	
POS 22 Political Issues and Public Policy SB	
POS 325 Public Policy Development SB 3	
POS 426 Elements of Public Policy SB 3	
Choose one or two from the courses below 3 or 6	
POS 316 State and Local Government SB 3	
POS 370 Public Administration SB 3	
POS 410 Urban Government and Politics SB 3	
POS 422 Politics of Bureaucracy SB 3	
Choose up to one from the courses below up to 3	
POS 313 The Congress SB 3	
POS 314 The American Presidency SB 3	
POS 484 Internship up to 3 semester hours for a policy administration related internship 3	
Total 15	

Certificate students must have a minimum GPA of 2.0; only courses in which students have a grade of "C" 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 336, for more information.

**Certificate in Civic Education.** The Civic Education Certificate is designed to contribute to the preparation of undergraduate students for

- careers in primary and secondary education where the teaching of government and civics may be involved;
- careers or voluntary participation in politics, public service, and civic and social movements; and
- 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 1 Political Ideologies SB 3	3
POS 346 Problems of Democracy HU 3	3
POS 442 American Political Thought HU 3	3
Choose one from the courses below 3	
POS 34 History of Political Philosophy I HU, H 3	
POS 34 History of Political Philosophy II HU, H 3	
POS 443 Topics in Contemporary Political Theory HU 3	
Choose one from the courses below 3	
POS 11 Government and Politics SB 3	
POS 15 Comparative Government SB, G 3	
POS 160 Global Politics SB, G 3	
POS 27 American Legal System SB 3	
POS 30 Contemporary Controversies in Global Politics SB, G 3	
POS 313 The Congress SB 3	
POS 314 The American Presidency SB 3	
POS 315 The Supreme Court SB 3	
POS 33 Contemporary Controversies in Domestic Politics SB 3	
POS 337 American Political Parties SB 3	
POS 333 Interest Groups SB 3	
POS 371 Law and Society SB 3	
POS 417 The Arizona Political System SB 3	
POS 435 Women and Politics SB, C 3	
POS 439 Minority Group Politics in America SB, C 3	

Total 15

Certificate students must have a minimum GPA of 2.0; only courses in which students have a grade of "C" 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

Literary and critical inquiry MA mathematics CS computer statistics quantitative applied HU humanities and fine arts SB social and behavioral science SG natural science—general courses SQ natural science quantitative Cultural diversity of the United States Global history Geography General Studies page 8

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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 15 Comparative Government SB, G 3	
POS 16 Global Politics SB, G 3	
Choose one from the courses below	3
POS 361 American Foreign Policy SB, G 3	
POS 364 U.S. National Security Analysis SB 3	
Choose two from the courses below	6
POS 3 Contemporary Interventions in Global Politics SB, G 3	
POS 465 International Organization and Law SB, G 3	
POS 467 International Security SB, G 3	
POS 486 International Political Economy SB, G 3	
Choose one from the courses below	3
POS 350 Comparative Politics SB, G 3	
POS 355 Russia and Successor States SB, G 3	
POS 356 Western Europe SB, G 3	
POS 357 South Asia Politics SB, G 3	
POS 358 Southeast Asia SB, G 3	
POS 359 African Politics and Society SB, G 3	
POS 360 World Politics SB, G 3	
POS 451 China, Japan, and the Koreans SB, G 3	
POS 452 China SB, G 3	
POS 453 South America SB, G 3	
POS 454 Mexico SB, G 3	
POS 455 Central America and the Caribbean SB, G 3	
POS 459 South and Southern Africa SB, G 3	
POS 463 Inter-American Relations SB, G 3	
POS 465 Comparative Asian Foreign Politics SB, G 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 on only courses in which students have a grade of "C" 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 338, for more information.

**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 SB	3
POS 110 Government and Politics SB	3
or POS 310 American National Government SB	3
POS 150 Comparative Government SB, G	3
POS 160 Global Politics SB, G	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" or higher, no more than one "D" 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.

**SECONDARY EDUCATION—B.A.E.**

**Political Science.** The major teaching field consists of 45 semester hours, 30 of which must be in political science and 15 in closely related fields.

The following courses are required:

POS 101 Political Ideologies SB	3
POS 110 Government and Politics SB	3
or POS 310 American National Government SB	3
POS 150 Comparative Government SB, G	3
or POS 160 Global Politics SB, G	3
POS 301 Empirical Political Inquiry SB	3
POS 417 The Arizona Political System SB	3
POS 480 Methods of Teaching Government	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 major. Upper division courses that count toward the major must have a grade of "C" or higher.

The minor teaching field consists of 24 semester hours in political science courses.

The following six courses are required:

POS 101 Political Ideologies SB	3
POS 110 Government and Politics SB	3
or POS 310 American National Government SB	3
POS 150 Comparative Government SB, G	3
or POS 160 Global Politics SB, G	3
POS 301 Empirical Political Inquiry SB	3
POS 417 The Arizona Political System SB	3
POS 480 Methods of Teaching Government	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 spe-

cialization must have a grade of "C" or higher; no more than one "D" grade in a lower division course may be counted in the minor.

**Social Studies.** For more information, 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)

*fa 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)

*fa 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 awarded for only POS 110 or 310  
*General Studies SB*

#### POS 150 Comparative Government. (3)

*fa 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)

*fa 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 part of a development of public policy  
*General Studies SB*

#### POS 230 Current Issues in National Politics. (3)

*fa 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)

*fa*

Interdisciplinary introduction to the cultures, regions, political systems, geography, and history of Southeast Asia. Cross-listed as ASB 240, GCU 240, HST 24, REL 24. Credit is awarded for only ASB 240 or GCU 240 or HST 240 or POS 240 or REL 24  
*General Studies G*

#### POS 260 Current Issues in International Politics. (3)

*fa 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)

*fa 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)

*fa and spring*

Explores key controversies regarding politics including security, economic stability, poverty, gender, race, and the environment  
*General Studies SB G*

#### POS 301 Empirical Political Inquiry. (3)

*fa 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 portrayals of political events, ethnic groups, and social political situations in film, a major medium addressing questions of human values. May be repeated for credit when topics vary. Lecture, film discussion

#### POS 310 American National Government. (3)

*fa and spring*

Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification. Credit is awarded for only POS 310 or 110.  
*General Studies SB*

#### POS 311 Arizona Constitution and Government. (2)

*fa and spring*

Constitution and government of the State of Arizona. Credit is awarded 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 decisions 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 government in the United States. Credit is awarded 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)

*fa 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*

L: language and rhetoric MA: mathematics CS: computer statistics quantitative application HU: humanities and fine arts SB: social and behavioral sciences SG: natural sciences—general core course SQ: natural and quantitative computation and diversity in the United States GG: global history. See General Studies page 83.

## COLLEGE OF LIBERAL ARTS AND SCIENCES

### 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*

Examine how minority corporate, labor, farmer, consumer, environmental, health, education and public interest groups address emerging issues. movements influence government.

*General Studies SB*

### POS 336 Electoral Behavior. (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*

### 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*

Classic and modern democratic theory e.g. the nature of democracy, majority rule, representation, equality and the value of political participation.

*General Studies H*

### 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 evidence of democratic 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 Western Europe. (3)

*once a year*

Structures and behavior of governmental institutions and political processes in selected countries of Western Europe.

*General Studies SB G*

### POS 357 South Asia Politics. (3)

*once a year*

Analyze the political culture, politics and political system of South Asia. 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, political processes and government institutions in Africa south of the Sahara.

*General Studies SB G*

### POS 360 World Politics. (3)

*once a year*

Theory and practice of statecraft applied to selected states, regions or eras.

*General Studies SB G*

### POS 361 American Foreign Policy. (3)

*once a year*

United States' foreign policy since World War II. Technical questions formulating American foreign policies.

*General Studies SB G*

### POS 364 U.S. National Security Analyses. (3)

*once a year*

Theoretical and empirical assessment of U.S. national security policy in the post-Cold War era.

*General Studies SB*

### 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 Urban Government and Politics. (3)

*once a year*

Governmental organizations, decisions, making structure and problems of urban political systems.

*General Studies SB*

### POS 417 The Arizona Political System. (3)

*selected semesters*

Contemporary political problems within the context of Arizona's constitutional and social frameworks. Meets the Arizona Constitution requirement for teacher certification. Credit is awarded for only POS 417 or 311.

*General Studies SB*

### POS 422 Politics of Bureaucracy. (3)

*selected semesters*

Bureaucracy as a political entity: internal dynamics of public agencies, the relationship between public agencies and other political entities.

*General Studies SB*

### POS 423 Politics of Budgeting. (3)

*selected semesters*

Policy process in budgeting: strategies used to influence this process; recent reforms in public budgeting.

*General Studies SB*

### POS 426 Elements of Public Policy (3)

*once a year*

Each semester 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 political campaign, reporter campaign, strategist and voter. Electorals 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. Electorals 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*

Women's roles in various political contexts. Focus varies with instructor.

*General Studies SB C*

## DEPARTMENT OF POLITICAL SCIENCE

**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 in political processes and developmental problems in China from a comparative perspective

*General Studies SB, G*

**POS 453 South America. (3)**

*once a year*

Governmental institutions political processes and developmental problems of the South American states

*General Studies SB, G*

**POS 454 Mexico. (3)**

*once a year*

Mexican federal state, and other 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 the relationship actions 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 taxation 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 and various rights civil liberties

*General Studies SB*

**POS 480 Methods of Teaching Government. (3)**

*selected semesters*

Methods of instruction organization and presentation of subject matter in political science Prerequisite 15 hours in political science or instructor approval

**POS 484 Internship. (1-12)**

*selected semesters*

**POS 485 Political Economy. (3)**

*once a year*

Problems policies, and possibilities of various political economic systems a detailed interrelationship of aptism, 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 equity ecology and peace

*General Studies SB G*

**POS 498 Pro-Seminar. (3)**

*once a year*

Small group study and research for advanced students within the major area Prerequisite major in the department or instructor approval

*General Studies L*

**POS 499 Individualized Instruction. (3)**

*selected semesters*

**POS 501 Methods of Political Science. (3)**

*selected semesters*

Problems of method and knowledge in political science strategies of political inquiry and issues in philosophy of social science

**POS 502 Philosophy of Political Inquiry. (3)**

*once a year*

Problems of knowledge and method in political science with attention to both empirical and evaluative analysis

**POS 503 Empirical Political Inquiry. (3)**

*once a year*

Research methods and techniques of the discipline emphasizing empirical foundations and analytic methods employed in subfield

Prerequisite POS 401 or its equivalent instructor approval

**POS 530 American Politics. (3)**

*once a year*

Examinations or debates in the study of American political processes and institutions Covers parties, media elections public opinion interest groups and the three branches of government Seminar

**POS 545 Themes in Political Thought. (3)**

*selected semesters*

Examines a particular theme or problem in political thought from both a historical and contemporary perspective May be repeated with approval of the director of graduate studies Seminar Prerequisite instructor approval

Literary and rhetorical inquiry MA mathematics CS computer statistics quantitative application HU humanities and fine arts SB social and behavioral sciences SG natural science—general core course SQ literature and culture C cultural diversity United States GG global history See General Studies page 83

## COLLEGE OF LIBERAL ARTS AND SCIENCES

### **POS 550 Comparative Politics. (3)**

*once a year*

Surveys major approaches across topical areas such as revolutions, authoritarianism, policy processes, interest groups, and electoral politics. Focus varies with instructor. Sem nar.

### **POS 560 International Relations. (3)**

*once a year*

Surveys major theoretical approaches and debates in international relations. Sem nar.

### **POS 563 Comparative Asian Security Policies. (3)**

*se e c t e d s e m e s t e r s*

Analyses domestic and international constraints of systems and economic components in security decisions by major powers and Asia nations. Sem nar. Prerequisite: instructor approval.

### **POS 590 Reading and Conference. (1-12)**

*se e c t e d s e m e s t e r s*

### **POS 591 Seminar. (1-12)**

*once a year*

Topics may include the following:

- American Politics 3
- Comparative Politics 3
- Global Politics 3
- Political Theory 3

### **POS 592 Research. (1-12)**

*se e c t e d s e m e s t e r s*

### **POS 598 Special Topics. (1-4)**

*once a year*

Topics may include the following:

- American Politics 3
- Comparative Politics 3
- Global Politics 3
- Political Theory 3

### **POS 599 Thesis. (1-12)**

*se e c t e d s e m e s t e r s*

### **POS 601 Advanced Experimental Research. (3)**

*se e c t e d s e m e s t e r s*

Introduces experimental and qualitative experimental research designs in political research including laboratory techniques and topics in the analysis of variance. Prerequisite: POS 503 or its equivalent.

### **POS 602 Advanced Survey Research. (3)**

*se e c t e d s e m e s t e r s*

Present design and conduct of political surveys, including sampling instrument design, causal statistical analysis and analysis of survey data. Prerequisite: POS 503 or its equivalent.

### **POS 603 Polimetrics I. (3)**

*once a year*

Introduces theory and practice of linear regression analysis. Provide skill to read, understand, and evaluate professional literature using regression analysis. Prerequisite: both POS 401 and 503 or on y nstructor approval.

### **POS 604 Polimetrics II. (3)**

*once a year*

Applies quantitative techniques to research topic producing publishable papers through exposure to time series, logit and probit and simultaneous equations. Prerequisites: a combination of POS 401 and 503 and 603 or on y nstructor approval.

### **POS 606 Qualitative and Textual Analysis. (3)**

*s p r i n g n o d d y e a r s*

Method and theory for the analysis of qualitative materials. Systematic approaches for case studies, content analysis, critical analysis of texts. Discussion. Sem nar.

### **POS 635 State Politics and Public Policy. (3)**

*se e c t e d s e m e s t e r s*

Introduces comparative state policy emphasizing policy performance difference among the states and the reasons for these differences. Sem nar. Prerequisites: both POS 530 and 603 or on y nstructor approval.

### **POS 636 Electoral Behavior. (3)**

*se e c t e d s e m e s t e r s*

Introduces fundamental concepts of electoral behavior. Emphasizes presidential elections and examines why people vote and how their votes are determined. Sem nar. Prerequisites: both POS 530 and 603 or on y nstructor approval.

### **POS 638 Law and Politics. (3)**

*se e c t e d s e m e s t e r*

Emphasizes research in such topics as constitutional law, welfare and the law, American legal system, judicial process and judicial selection. Sem nar. Prerequisite: instructor approval.

### **POS 651 Politics of Change and Development. (3)**

*se e c t e d s e m e s t e r s*

Examines competing approaches to national social and political change. Sem nar. Prerequisite: instructor approval.

### **POS 650 The Modern World System. (3)**

*se e c t e d s e m e s t e r s*

Theoretically driven historical analysis of the organization and operation of the international political economy since the 16th century. Sem nar. Prerequisite: instructor approval.

### **POS 661 The State. (3)**

*se e c t e d s e m e s t e r s*

Examines the roles of state, state-society relations, and interstate politics. Emphasizes ongoing questions of sovereignty, territoriality, violence, representation, democracy, and change. Sem nar. Prerequisite: instructor approval.

### **POS 662 International Organization. (3)**

*se e c t e d s e m e s t e r s*

History, practical aspects, significance, and future of international institutions, transnational regimes, and other approaches to international organization. Sem nar. Prerequisite: instructor approval.

### **POS 664 War, Peace, and Conflict Processes. (3)**

*se e c t e d s e m e s t e r s*

Systematic analysis of the causes of war, the preconditions for peace, and approaches to the resolution of conflict. Sem nar. Prerequisite: instructor approval.

### **POS 665 Foreign Policy Theory. (3)**

*se e c t e d s e m e s t e r s*

Examines foreign policy theory and methods. Development and critique of research designs analyzing foreign policy processes within and among nations. Sem nar. Prerequisite: instructor approval.

### **POS 691 Seminar. (1-12)**

*se e c t e d s e m e s t e r s*

### **POS 790 Reading and Conference. (1-12)**

*se e c t e d s e m e s t e r s*

### **POS 792 Research. (3)**

*f a l l a n d s p r i n g*

Projects in various areas of political science. Prerequisite: doctoral student.

**Omnibus Courses.** For an explanation of courses offered but not specified in this catalog, see Omnibus Courses, page 56.

**Department of Psychology**

psych.la.asu.edu

480 965-3326

PSY 237

**Morris Okun, Acting Chair**

**Regents' Professors:** C'ad'n' Eisenberg Russo

**Professors:** A ken, Barrera Braun, Braver Castro, Chass n Homa Karo y Kenr ck K een Knight, Lanyon, L nder, MacK nnon, M sap Neuberg, Okun Park nson, Presson Re'ch, Sada a Sand er Somerv e, Van Orden, West Wo ch k, Zautra

**Associate Professors:** Castaneda, Dav s Fabr c us, Go d nger, Gonzales Leshow tz Nagosh , Ne sewander, Nemeroff Saenz Stone

**Assistant Professors:** E Amazeen P Amazeen, Conrad Khoo Lemery Luecken McBeath

**Senior Lecturers:** Barton We gand Wos nksk

**Lecturer:** Pa mer

The Department of Psychology n ainta ns an Undergrad uate Adv isement Office staffed by trained personnel. All Psychology ma ors are encouraged to meet with an under graduate advisor once each semester to ask questions regarding the choice of courses. Failure to do so may pre vent graduation at the expected time. It is the responsi ty of the student to consult with an undergraduate advisor

**PSYCHOLOGY—B.A.**

The B.A. degree in Psychology consists of 31 semester hours in psychology including at least 15 upper division semester hours. Required courses, which must be passed with a minimum grade of "C" are as follows.

PGS 111	Introduction to Psychology SB	3
PGS 115	Personality Theory and Research SB	3
	or PGS 341 Developmental Psychology SB 3	
	or PGS 350 Social Psychology SB 3	
PSY 231	Introduction to Statistics CS	3
PSY 291	Research Methods L SG	4
PSY 323	Sensation and Perception	3
	or PSY 320 Learning and Motivation 3	
	or PSY 324 Memory and Cognition 3	
	or PSY 325 Physiological Psychology 3	
Total		16

Also required are one additional upper division PSY course (excluding PSY 484, 492, 493, 497, and 499), two additional upper-division PGS or PSY courses, and two additional psychology courses (excluding PGS 194, 270, 484, and PSY 484 and 497). A maximum of three semester hours of Supervised Research (PGS or PSY 399, PGS or

PSY 499, or PSY 492) and a maximum of three hours of Honors Thesis (PSY 493) can be used to satisfy major requirements. Students may take a maximum of six hours of PGS or PSY 399 and six hours of PGS 499 and PSY 499 combined. Eighteen hours in courses related to psychology must be passed with a minimum grade of "C." They must be approved by an undergraduate advisor and include MAT 119 (or a higher level mathematics course) in addition to one course from the following:

CSE 180	Computer Literacy CS	3
CSE 185	Internet and the World Wide Web	3

See "College Degree Requirements," page 330.

**PSYCHOLOGY B.S.**

The B.S. degree in Psychology consists of 31 semester hours in psychology, including at least 15 upper division hours. Required courses, which must be passed with a minimum grade of "C," are as follows:

PGS 110	Introduction to Psychology SB	3
PGS 315	Personality Theory and Research SB	3
	or PGS 341 Developmental Psychology SB 3	
	or PCS 350 Social Psychology SB 3	
PSY 231	Introduction to Statistics CS	3
PSY 291	Research Methods L SG	4
PSY 323	Sensation and Perception	3
	or PSY 320 Learning and Motivation 3	
	or PSY 324 Memory and Cognition 3	
	or PSY 325 Physiological Psychology 3	
Total		16

Also required are one additional upper division PSY course (excluding PSY 484, 492, 493, 497, and 499); two additional upper-division PGS or PSY courses, and two additional psychology courses (excluding PGS 194, 270, and 484, and PSY 484 and 497). A maximum of three semester hours of Supervised Research (PGS or PSY 399, PGS or PSY 499, or PSY 492) and a maximum of three hours of Honors Thesis (PSY 493) can be used to satisfy major requirements. Students may take a maximum of six hours of PGS or PSY 399 and six hours of PGS 499 and PSY 499 combined. Eighteen hours in courses related to psychology must be passed with a minimum grade of "C." They must be approved by an undergraduate advisor and include MAT 210 Brief Calculus (or higher); one life science lab course (BIO or MIC); one physical science lab course (AST, CHM, GLG, or PHY); and one course from the following:

CSE 180	Computer Literacy CS	3
CSE 185	Internet and the World Wide Web	3

Further, the science courses taken to satisfy the B.S. degree requirements cannot be used to meet the science (SQ or SG) portion of the university General Studies requirement.

L iteracy and r it a nq y MA mathematics CS compute st t t qualitative app ation HU hu a t and f t SB s c and beha ora s en es SG nat e q er are ore SQ natura ce e qua tative C t l a dve ty n the nt d St t s G g ba H h tor ca S e Genera St d e page 83

**COLLEGE OF LIBERAL ARTS AND SCIENCES**

**MINOR IN PSYCHOLOGY**

The minor in Psychology consists of 27 hours in psychology, including the following:

PGS 111 Introduction to Psychology SB	.....3
PGS 305 Personality Theory and Research SB	.....3
or PCS 41 Developmental Psychology SB 3	
or PCS 355 Developmental Psychology SB 3	
PSY 236 Introduction to Statistics	.....3
PSY 290 Research Methods I SG	.....4
PSY 325 Statistics II Conceptual	.....3
PSY 327 Laboratory and Methods 3	
or PSY 344 Measurement and Evaluation 3	
or PSY 275 Physiological Psychology 3	
or PSY 276 Psychological Research 3	
or PSY 277 Psychological Research 3	
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Two additional upper division PGS or PSY courses are required.

A maximum of three semester hours of Supervised Research PGS or PSY 399 PGS or PSY 499, or PSY 492 and a maximum of three hours of Honors Thesis PSY 493 can be used to satisfy minor requirements. Students with an appropriate equivalent course may exclude PSY 236 from the requirements. All courses must be passed with a minimum grade of "C".

**SECONDARY EDUCATION—B.A.E.**

**Social Studies.** For more information call the Office of Student Services in the College of Education at 480 965 5555.

**GRADUATE PROGRAMS**

The faculty in the Department of Psychology offer a program leading to the Ph.D. degree. See the *Graduate Catalog* for equi-erents.

**PSYCHOLOGY (SOCIAL AND BEHAVIORAL) (PGS)**

- PGS 101 Introduction to Psychology. (3)**  
*fall spring summer*  
Major area theory and research in psychology. Req. respart part in department sponsored research or an educational 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 variation and deviations theories of sexual attraction differences and sexual dysfunction and treatment. Prerequisite: PGS 111  
*General Studies SB*
- PGS 270 Psychology of Adjustment (3)**  
*fall spring, summer*  
Principles of mental health adjustment conflict stress and coping. Principles derived from clinical and experimental research intended for nonmajors cannot be used for major credit. Prerequisite: PGS 101  
*General Studies SB*
- PGS 304 Effectiveness Training. (3)**  
*one a year*  
Understanding and providing effective behavior skills for information analysis influence cognitive problem solving and decision making. Prerequisite: MA 119 or PSY 30 or its equivalent  
*General Studies*

- PGS 306 Environmental Psychology. (3)**  
*fall spring summer*  
Concepts and research strategies in the study of behavior interaction with physical environment. Prerequisite: PGS 111  
*General Studies SB*
- PGS 315 Personality Theory and Research. (3)**  
*fall spring summer*  
Definition and description of personality in terms of the relevant and methodological approaches. Prerequisite: 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*  
Theory and methods of intervention with preschool children and supervised practicum in the Child Study Laboratory. 1 hour lecture 6 hours partium. Prerequisites: DE 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 perception perception and perception. Prerequisite: PGS 101  
*General Studies SB*
- PGS 351 Honors Social Psychology. (3)**  
*selected semesters*  
Critical analysis of human social behavior for honors student topics include stereotyping social influence attraction aggression helping groups and attitudes. Open only to student without previous credit for PGS 350. Prerequisite: PGS 111 honors standing instructor approval  
*General Studies L SB*
- PGS 365 Community Psychology. (3)**  
*fall and spring*  
Mental health and psychology we being in the community. emphasize current issues and related research. Prerequisite: PGS 315 or 350  
*General Studies SB*
- PGS 394 Special Topics. (1-4)**  
*selected semesters*
- PGS 399 Supervised Research. (1-3)**  
*fall spring summer*  
Experience within the context of current faculty research projects. Responsibility assigned depending on qualifications. Y grade only. May be repeated for a total of 6 hours. Prerequisite: approval of faculty member before registration. B average minimum. Prerequisite: 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 semester*  
Analyze maintenance and gains associated with cognitive and affective aging and individual differences in coping with normative transitions. Prerequisite: 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 41 or instructor approval  
*General Studies L SB*

**PGS 443 Abnormal Child Psychology. (3)***fa 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 on y nstrutor approval  
*General Studies L/SB*

**PGS 444 Adolescent Psychology and Psychopathology. (3)***selected semesters*

Advanced level survey of normal adolescent psychology, a development and psychology of adolescents of this age period. Lecture, discussion. Prerequisites: PGS 101, 341, PSY 290  
*General Studies L*

**PGS 445 Child Language and Drawing. (3)***fa*

Language acquisition and developmental change 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 450 Social Perception and Cognition. (3)***selected semesters*

Critical analysis of human social perception and social cognition. Topics include attribution, inference, memory, attention, impression formation, stereotype change. Lecture, discussion. Prerequisites: PGS 101, 350  
*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)***fa*

Studies applications of social psychology theory and concepts in natural settings: research design and data analysis. Lecture, laboratory activities. Prerequisite: PGS 111, 350, PSY 230  
*General Studies L*

**PGS 453 Organizational Behavior. (3)***selected semesters*

Survey of psychology theory and research as applied to the behavior of individuals in organizational settings. Lecture, discussion. Prerequisites: PGS 101, 350

**PGS 458 Group Dynamics. (3)***fa*

Theories and methods of group leadership, group effectiveness, communication within groups, and relations between groups and individual members. Prerequisite: PGS 35

**PGS 461 Interpersonal Influence. (3)***selected semesters*

Principles and procedures that affect the process of social influence: consideration of attitude, compliance, induction, and perceptual influence. Prerequisite: PGS 35  
*General Studies SB*

**PGS 462 Health Psychology. (3)***fa and spring*

Contributions of psychology to health promotion and disease prevention: adaptation to acute and chronic disease and to the health care system. Prerequisites: PSY 230, 290

**PGS 463 Advanced Psychology of Adjustment. (3)***fa*

Critical analysis and effective expression of psychology theory and research on the topic of adjustment. Lecture, discussion, writing. Prerequisite: PGS 101, 350, PSY 230, 290, completion of First Year Composition requirement, a General Studies L course.  
*General Studies L*

Prerequisites: PSY 230, 290, completion of First Year Composition requirement, a General Studies L course.

*General Studies L***PGS 464 Minority Issues in Psychology. (3)***spring*

Psychological issues relating to the diversity of human culture, experiences, and among ethnic minorities in the U.S. Prerequisite: PSY 290

**PGS 465 Psychology of Stress and Coping. (3)***fa*

Readings in theory and research in the area of stress and coping. Lecture, discussion on class presentations. Prerequisites: PGS 315 or 350, PSY 290  
*General Studies*

**PGS 466 Abnormal Psychology. (3)***fa, spring, summer*

Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, nomenclature, and 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 on y nstrutor approval  
*General Studies L*

**PGS 468 Psychology and Law. (3)***fa and spring*

Theories, research, and practice in psychology as related to law, including criminal law, 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, considerations of ethical, social, and legal aspects of testing. Prerequisite: PSY 290

**PGS 472 Clinical Psychology. (3)***fa 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 56

**PSYCHOLOGY (SCIENCE AND MATHEMATICS) (PSY)**

For more PSY courses, see the Faculty of Applied Psychology under East College at AS East

**M PSY 230 Introduction to Statistics. (3)***fa, spring, summer*

Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology. Self-paced PSY and lecture sections. Prerequisites: MAT 117, PGS 101  
*General Studies CS*

**M PSY 290 Research Methods. (4)***fa and spring*

Planning, execution, analysis, and reporting of experiments. Lecture, procedures, and instruments in representative areas of psychology. research: 3 hours lecture, 3 hours lab. Prerequisites: ENG 101 or 105, PSY 230  
*General Studies L/SG*

Literacy and critical inquiry: MA mathematics, CS computer statistics, quantitative applications, HU humanities and fine arts, SB social and behavioral science—general core courses, SQ natural science—quantitative, Cultural diversity in the United States, Global History. See General Studies page 83

## COLLEGE OF LIBERAL ARTS AND SCIENCES

### **M PSY 320 Learning and Motivation. (3)**

*fa spring summer*

Principles of conditioning and motivational 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)**

*fa and spring*

Underlying processes of vision 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)**

*fa 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)**

*fa 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 applications of statistics to psychology highly recommended for students interested in attending graduate school 3 hours lecture 1 hour lab Prerequisite PSY 230

*General Studies L*

### **M PSY 390 Experimental Psychology. (3)**

*spring*

Construction of experiments in PSY 290 with emphasis on multifactor designs and programmatic sequence of experiment Lecture/lab Prerequisite PSY 290

*General Studies*

### **M PSY 399 Supervised Research. (1-3)**

*fa 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 424 Genetic Psychology (3)**

*spring*

Introduces the concepts methods and findings of behavioral genetics for Psychology majors Prerequisite PGS 101 PSY 230 290

*General Studies*

### **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 semester*

Structure and function of mammalian, including sheep brain and section hour lecture 3 hours lab Prerequisite PSY 325 or its equivalent

*General Studies L*

### **M PSY 434 Cognitive Psychology. (3)**

*spring*

Human organizational processes of information from perception to cognition Abstract concepts and memory attention and imagery Prerequisite PSY 323 or 24 instructor approval

*General Studies*

### **M PSY 437 Human Factors (3)**

*fa*

Emphasizes human factors in high technology systems Specific topics include systems development systems analysis techniques and controls Prerequisite both PSY 2 and upper division standing or on-line instructor approval

*General Studies L*

### **M PSY 470 Psychopharmacology (3)**

*fa and spring*

Basic drug action at synapses and behavioral effects Psychopharmacology and medical applications and treatments 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 semester*

### **M PSY 493 Honors Thesis. (1-6)**

*selected semester*

### **M PSY 494 Special Topics. (1-4)**

*selected semester*

### **M PSY 497 Honors Colloquium. (1-6)**

*selected semesters*

### **M PSY 498 Pro-Seminar. (1-7)**

*fa and spring*

Topics may include the following  
• Behavioral Neuroscience Research 3  
*General Studies L*

### **M PSY 499 Individualized Instruction. (1-3)**

*selected semesters*

### **M PSY 501 Supervised Teaching. (4)**

*fa*

Experience and examination of perspectives on teaching under graduate psychology Prerequisites graduate standing in psychology instructor approval

### **M PSY 506 Survey of Research in Environmental Psychology. (3)**

*fa*

Major topics and paradigms in the study of person environment relationship Prerequisite instructor approval

### **M PSY 512 Advanced Learning. (3)**

*selected semesters*

Principles and theories of learning emphasizing research literature Prerequisite instructor approval

### **M PSY 524 Advanced Physiological Psychology. (3)**

*selected semesters*

Contribution of physiological processes and brain function to fundamental behavior processes Prerequisite instructor approval

### **M PSY 528 Sensation and Perception. (3)**

*selected semesters*

Principles of sensory and perceptual processes emphasizing research literature Prerequisite instructor approval

### **M PSY 530 Analysis of Variance in Psychological Research. (3)**

*fa*

One way and factorial designs contrasts post hoc tests probing of interactions mixed designs power computer applications Prerequisite undergraduate statistics or instructor approval

### **M PSY 531 Multiple Regression in Psychological Research. (3)**

*spring*

Multiple regression and correlation hierarchical regression interaction correlation near relationship predictor ANOVA regression regression diagnosis regression graphs Prerequisite PSY 530 instructor approval

### **M PSY 532 Analysis of Multivariate Data. (3)**

*fa*

Matrix algebra for multivariate procedures component analysis canonical and discriminant analysis classification MANOVA logistic regression hierarchical least squares Prerequisites both PSY 530 and 531 or on-line instructor approval

### **M PSY 533 Structural Equation Modeling (3)**

*spring*

Path analysis exploratory and confirmatory factor analysis recursive and non-recursive latent variables mean and covariance structures latent growth models Prerequisite PSY 532 instructor approval

### **M PSY 534 Psychometric Methods. (3)**

*fa and spring*

Theory and practice of psychometric measurement using classical and modern test theories Reliability assessment test validity data construction test usage Prerequisite both PSY 530 and 531 or on-line instructor approval

**M PSY 535 Cognitive Processes. (3)***selected semesters*

Theoretical empirical treatment of the human organism as a processor of information including abstract on memory structure problem solving, and thinking Prerequisite instructor approval

**M PSY 536 Statistical Methods in Prevention Research. (3)***fall and spring*

Statistical methods used in prevention research including epidemiological methods logistic regression program effect estimation estimation, and medication analysis Prerequisites both PSY 530 and 531 or on instructor approval

**M PSY 537 Longitudinal Growth Modeling. (3)***selected semesters*

Growth modeling methodology to describe individual variation in development over time Employs multilevel and structural equation modeling frameworks Prerequisite PSY 533 or instructor approval

**M PSY 538 Advanced Structural Equation Modeling. (3)***selected semesters*

Mean and covariance structure analysis includes multiple group modeling, two level hierarchical modeling, longitudinal growth modeling, analysis with categorical outcomes Prerequisite: PSY 533 or instructor approval

**M PSY 539 Meta-Analysis I. (1)***fall*

Meta analysis searching the literature coding study characteristics computing effect sizes Must be followed by PSY 540 Semester Prerequisites both PSY 530 and 531 or on instructor approval

**M PSY 540 Meta-Analysis II. (2)***spring*

Continuation of PSY 539. Meta analysis, computing effect sizes and analyzing the heterogeneity of effect sizes Semester Prerequisite PSY 539

**M PSY 541 Research in Cognitive Development. (3)***selected semesters*

Theoretical and empirical issues in the study of children's knowledge and cognitive processes Comparison of research in Piagetian and other traditions Prerequisite admission to Psychology Ph D program or instructor approval

**M PSY 542 Social Development. (3)***selected semesters*

Reviews and critiques major issues in the area of social development Covers theory research and content Prerequisite instructor approval

**M PSY 550 Advanced Social Psychology. (3)***fall and spring*

Theory and research concerning interpersonal perception, decision making attitude formation and change group processes, social motivation, and interaction processes Prerequisite instructor approval

**M PSY 551 Advanced Social Psychology. (3)***fall and spring*

Continuation of PSY 550 Prerequisite PSY 550 or instructor approval

**M PSY 553 Social Influence. (3)***selected semesters*

Researches literature relevant to attitude formation and change conformity obedience power compliance altruism and others Prerequisite PSY 551 or instructor approval

**M PSY 555 Experimental and Quasi-Experimental Designs for Research. (3)***selected semesters*

Reviews research techniques Analyzes laboratory and field research applications to specific topics Prerequisite instructor approval

**M PSY 569 Advanced Study of Personality. (3)***selected semesters*

Personality as a theoretical concept in psychology including definition, problems, behavioral and traditional approaches the measurement of personality and current research issues Prerequisite instructor approval

**M PSY 572 Psychological Assessment. (3)***fall*

Theory and research on assessment of personality psychopathology and intelligence construction of psychological assessment instruments Prerequisite admission to clinical Ph D program or instructor approval

Prerequisite admission to clinical Ph D program or instructor approval

**M PSY 573 Psychopathology. (3)***fall*

Theory and research relating to the contribution of psychological, social, physiological and genetic factors to the development and persistence of abnormal behavior Prerequisite admission to Psychology Ph D program or instructor approval

**M PSY 574 Psychotherapy. (3)***spring*

Detailed survey of the theoretical and empirical literature relating to verbal psychotherapy Prerequisite admission to the clinical Ph D program or instructor approval

**M PSY 578 Developmental Psychopathology. (3)***selected semesters*

Covers major theories and research related to the development of psychological disorders of childhood and adolescence

**M PSY 582 Community Psychology. (3)***summer*

Community systems intervention techniques, consultation models, history and current status of community mental health movement and conceptualization of the roles of community psychologists in social system intervention Prerequisite advanced standing in Psychology Ph D program or instructor approval

**M PSY 588 Consultation Methods. (3)***selected semesters*

Several theories and strategies of organizational consultation Developmental consultation skills through simulation and practical experience Prerequisite advanced standing in Psychology Ph D program or instructor approval

**M PSY 624 Clinical Neuroscience. (3)***spring*

Examines the biological underpinnings of psychological disorders at the molecular cellular and system levels schizophrenia depression anxiety etc Lecture, pro seminar Prerequisites graduate standing instructor approval

**Omnibus Courses.** For an explanation of courses offered but not specified in this catalog see Omnibus Courses page 56

## Department of Religious Studies

[www.asu.edu/clas/religious\\_studies](http://www.asu.edu/clas/religious_studies)

480 965-7145

ECA 377

**Joel Gereboff, Chair**

**Professors:** Cady, Coudert, Feidhaus Foard, Samuelson

**Associate Professors:** Cay, Fessenden Gereboff Moore, Morrison Schober Swanson Woodward

**Assistant Professors:** Benn Damre Leon, 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

Literary and critical theory MA mathematics CS computer statistics qualitative applications HU humanities and fine arts SB social and behavioral science general requirements SQ natural science—quantitative C interdisciplinary the United States Global history etc See [see a Student](#) page 83

## COLLEGE OF LIBERAL ARTS AND SCIENCES

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.

### 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 336, or access the department Web site at [www.asu.edu/clas/religious\\_studies](http://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.

**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 East European Studies," page 336.

**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. 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 awarded 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 awarded for only REL 200 or 100. Prerequisite: ENG 101 or 105.  
*General Studies: LHU 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: LH*

#### REL 202 Religion and Popular Culture. (3)

*once a year*  
Explores various intersections 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 205 Living and Dying. (3)

*selected semesters*  
Ways that religions have understood birth, sexuality, death, and the passing of generations. Example from traditions throughout the world. Lecture/discussion.  
*General Studies: HU*

#### 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: LHU H*

#### REL 225 African American Religion. (3)

*selected semesters*  
Introduces the history and development of the African American religious tradition. Lecture/discussion. Cross-listed as AFH 225. Credit is awarded for only AFH 225 or REL 225.  
*General Studies: HU C*

**REL 240 Introduction to Southeast Asia. (3)**

*fall*  
 Interdisciplinary introduction to the cultures, religious practices, systems, geography and history of Southeast Asia. Cross-listed as ASB 240 GCU 240 HS 240 POS 240 Credit satisfied for on y 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. Cross-listed as HUM 260 Credit satisfied for on y HUM 260 or REL 260  
*General Studies HU G*

**REL 270 Introduction to Christianity. (3)**

*once a year*  
 Beliefs, ceremonies, festivals and institutions of Christianity emphasized during 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: RE 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 non-terrestrial religions of the world  
*General Studies L/H*

**REL 310 Western Religious Traditions. (3)**

*fall and spring*  
 Religious traditions of Judaism, Christianity, and Islam compared. The 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 satisfied for on y 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. Cross-listed as AFH 322 Credit satisfied for on y AFH 322 or REL 322.  
*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. Cross-listed as AFH 323 Credit satisfied for on y AFH 323 or REL 323  
*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 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 missions and religious adaptation and prophetic messages and religious revitalization movements  
*General Studies L/H, C H*

**REL 332 South American Indian Religions. (3)**

*selected semesters*  
 Introduces the sacred stories, ceremonies and beliefs of Native South American peoples in the historical context  
*General Studies HU, G*

**REL 344 Religion and Values in Japanese Life. (3)**

*once a year*  
 Japanese values expressed in the life and annual cycles of the family, community 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 belief, 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 emphasized during its role in the history and culture of Asian societies  
*General Studies L/HU, G*

**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 satisfied for on y HUM 310 or REL 355  
*General Studies L/HU, H*

**REL 365 Islamic Civilization. (3)**

*fall*  
 Global history: a survey of Islamic cultures and societies up to the modern period. Lecture/discussion  
*General Studies HU, H*

L: literary and literary inquiry MA: mathematical CS: computer/tactical quantitative application HU: humanities and fine art SB: social and behavioral science SG: natural science—general/core course SQ: quantitative qualitative Cultural diversity in the United States G: global history See General Studies page 8

## COLLEGE OF LIBERAL ARTS AND SCIENCES

### 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 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, 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: H, 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, bioethics, 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 antevolutionism and scientific creationism in American culture. Lecture/discussion. Cross-listed as BO 344, HPS 311, HUM 371. Credit is allowed for only BO 344 or HPS 311 or HUM 371 or RE 383.

### REL 385 Contemporary Western Religious Thought. (3)

*selected semesters*

Introduces contemporary Jewish and Christian thought. Topics include religion and politics, problem of evil, interpretation of God, and feminist theology.  
*General Studies: L, 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. 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 ex roles within specific religions.  
*General Studies: HU, G*

### 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 response to the Holocaust.  
*General Studies: HU, H*

### REL 415 The Jewish Mystical Tradition. (3)

*selected semesters*

Examines some of the esoteric core of Judaism. Studies movement and literature such as Hasidism and Kabbalah.  
*General Studies: HU*

### REL 420 Religion in American Life and Thought. (3)

*selected semesters*

Influence of religion on American society, culture, and ideological character of religion in America. Prerequisite: REL 320 or 321 or its equivalent.  
*General Studies: HU*

### REL 426 American Preachers and Preaching: The Sermon in America. (3)

*selected semesters*

Life and work of notable American preachers. Emergence of the preacher as representative of American religion. 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: Jonathan Edwards, William Eery 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 Arabic texts, history, society, culture, and rituals. Prerequisite: both REL 365 and Religious Studies major or ony instructor approval.  
*General Studies: H, G*

### REL 470 Religion in the Middle Ages. (3)

*selected semesters*

Religious aspects of medieval and thought: variety of forms of dissent, heresy, and reform movements from the 4th to 13th centuries.  
*General Studies: H, H*

### REL 471 Reformation and Modern Christianity (3)

*selected semesters*

Protestant Reformation to contemporary Christian movements. Includes factors, the dissolution of the medieval Christian synthesis, variety of reform movements and reformation patterns. Catholic counter-reformation 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 from lecture discussions. 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 PS: Pro-Seminar in Religious Studies. (3)**

*see listed semesters*  
For students with a major or minor emphasis in Religious Studies.

**REL 499 Individualized Instruction. (1-3)**

*fall and spring*

**REL 501 Research Methods in Religious Studies. (3)**

*fall*  
Explores the major themes and methods in the study of religion, with primary focus on classical texts. Lecture/discussion.

**REL 502 Research Methods in Religious Studies. (3)**

*spring*  
Explores the major themes and methods in the study of religion, with primary focus on contemporary texts. Lecture/discussion.

**REL 591 Seminar. (3)**

*fall and spring*  
Topics on methodological issues in the study of religion. Prerequisite: Religious Studies graduate student or instructor approval.

**REL 592 Research. (1-12)**

*fall and spring*

**REL 598 Special Topics. (1-4)**

*fall and spring*  
May be repeated for credit. Topics may include the following:

- Christianity 3
- Islam 3
- Judaism 3
- Native American Religion 3
- Problems in Religious Studies 3
- Religion in America 3
- Religion in East Asia 3
- Religion in South and Southeast Asia 3
- Study of Religion: Comparative Religion 3
- Western Religious Thought/Ethics 3

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog, see Omnibus Courses, page 56.

**Department of Sociology**

www.asu.edu/clas/sociology

480-965-3546

SS 321

Verna M. Keith, Chair

**Professors:** Bonin, Cobas, Hackett, Kronenfeld, Kul's Nagasawa, Thomas, Weitz

**Associate Professors:** Benjamin Bar, Harlan Jacobson, Keith, Mi'er Loess, Su'van

**Assistant Professors:** Agadjanian, Glick, Padua

**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" or higher. The following courses are required:

SOC 101 Introductory Sociology SB	3
or SOC 30 Principles of Sociology SB	3
SOC 39 Social Statistics ICS	3
SOC 391 Sociological Research SB	3
SOC 483 History of Social Thought SB	3
or SOC 485 Sociological Knowledge L/SB	3
or SOC 486 Contemporary Theory SB	3

Total 15

Sociology majors may complete the remaining 15 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

Literary and critical theory MA, mathematical CS, computer/informative application HU, human and fine arts SB, social and behavioral science SG, natural science/geography/es SQ, natural science—quantitative C, leadership/the United States G, global health/care. See General Studies, page 8.

**COLLEGE OF LIBERAL ARTS AND SCIENCES**

of five focus areas: family issues, urban issues, diversity issues, work/organizational issues, and health issues. Students choosing this option must complete two required focus area courses and select the remaining four courses from a list of optional courses within that focus area. SOC 484 Internships 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/class/sociology/undergraduate/advising...](http://www.asu.edu/class/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 SB	3
or SOC 301 Principles of Sociology SB	3
SOC 399 Sociological Research SB	3
or SOC 481 History of Social Thought SB	3
or SOC 455 Sociology of Knowledge L SB	3
or SOC 456 Contemporary Theory SB	3
<b>Total</b>	<b>18</b>

The remaining four courses consist of sociology electives.

**SECONDARY EDUCATION—B.A.E.**

**Social Studies.** The major teaching field of social studies education consists of 63 semester hours of which 30 hours may be in criminal justice, economics, geography, history, political science, psychology, and sociology and are exactly those courses required for the B.A. degree in Sociology. Of the remaining hours, two groups of 12 hours each and one of six hours are generally taken in related social sciences plus SED 480 Special Methods of Teaching Social Studies.

The minor teaching field consists of 24 semester hours, at least six of which must be upper division. SOC 101 Introductory Sociology or SOC 301 Principles of Sociology, and SOC 270 Racial and Ethnic Relations or SOC 474 African Americans in Modern Society are required. The remaining 18 hours must be approved by the sociology advisor in consultation with the student and must include at least one course from at least four of the following six areas:

1. family,
2. intergroup relations and social psychology;
3. political comparative historical;
4. social problems and processes;
5. stratification occupations/organization, or
6. urban sociology/demography.

For more information, call the Office of Student Services at the College of Education at 480-965-5555.

**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 societal processes of interaction and social change. Credit awarded for only SOC 101 or 301. 2-hour lecture/1-hour discussion.  
*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*  
Premises: 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 awarded 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 investment in 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 318 Overview of Aging. (3)**

*selected semesters*  
Multidisciplinary introduction to gerontology. Explores the characteristics, experience, needs, and problems of older persons. Prerequisite: SOC 101 or 301 or instructor approval.  
*General Studies SB*

**SOC 321 Sociology of Work. (3)**

*fall and spring*  
Sociocultural 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 organization response to population growth/technology 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*  
Theories of population change; birth/deaths and migration/population policy. 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/environment/public health and cultural values related to social change. Lecture/discussion. Prerequisite: SOC 101 or 301 or instructor approval.

**SOC 340 The Sociology of Deviance. (3)***fa . spring summer*

Sociology analyzes of stigmatized behavior and conditions including the causes, effects, and management of stigma. Prerequisite: SOC 111 or 301 or instructor approval.

*General Studies SB***SOC 341 Modern Social Problems. (3)***fa spring summer*

Race relations, poverty, unemployment, and other current issues. Prerequisite: SOC 101 or 301 or instructor approval.

*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)***fa and spring*

Interaction patterns between the cocultural and individual socialization processes, norms, roles, and statuses collectively behavior. Prerequisite: SOC 101 or 301.

*General Studies SB***SOC 361 Variant Sexuality. (3)***fa*

Sociology research and theories dealing with homosexuality, transsexual, transsexual, and other variations in sexual orientation and gender identity. Prerequisite: SOC 111 or 301.

*General Studies SB***SOC 363 Men and Masculinity. (3)***selected semesters*

Sociology analyzes of how masculine identity is defined, negotiated, and variously constructed depending upon class, ethnicity, age, and sexual orientation. Prerequisite: SOC 301, WST 100, or 300.

*General Studies SB***SOC 365 The Sociology of Mass Communication. (3)***fa and spring*

Sociology exploration of the major mass media as a communication process in American society. Prerequisite: SOC 101 or 311 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, religion, and secular affairs. Lecture/discussion. Cross-listed as REL 318. Credit awarded for only REL 318 or SOC 375.

*General Studies HU SB C***SOC 390 Social Statistics I. (3)***fa . spring, summer*

Descriptive and inferential statistical methods for analysis of social data. Computer applications. Prerequisite: SOC 101 or 301. A General Studies MA course.

*General Studies CS***SOC 391 Sociological Research. (3)***fa spring, summer*

Methods of sociology research including the fundamental assumptions underlying research and some practical experiential research design, data collection techniques, and data analysis. Prerequisite: both SOC 101 or 301 and 390 or instructor approval.

*General Studies SB***SOC 415 The Family. (3)***fa spring, summer*

Family considered from the historical 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 311 and an additional 3 hours in sociology or on instructor approval.

*General Studies L SB***SOC 417 Family Violence. (3)***fa 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)***fa 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*

Interaction of culture, society, and religion, religion and social stratification, religious economic and political institutions, social change, and religion. Emphasizes American society and institutions. Prerequisites: both ASB 112 or SOC 101 or 301 and an additional 3 hours in sociology or on instructor approval.

*General Studies L SB***SOC 421 Education and Society. (3)***fa*

Uses contemporary sociology a perspective 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)***spring*

Sociology 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 on instructor approval.

*General Studies L SB***SOC 424 Women and Health. (3)***spring, odd years*

Women as health care workers and the issue of health 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)***fa and spring*

Social aspects of physical and mental 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 111 or 301.

*General Studies SB*

Letter and critical inquiry. MA mathematics. CS computer. Qualitative application. HU humanities and fine arts. SB social and behavioral sciences. SG agriculture—general agriculture. SQ natural science. P quantitative. C cultural diversity in the United States. G global history. See General Studies page 83.

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### **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)**

*selected semesters*

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*

Provides a perspective on how epidemics occur, are perceived in society, and affect it. 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 455 Social Movements. (3)**

*selected semesters*

Surveys theoretical approaches and research on historical and recent social movements. Emphasizes cultural, political, and social change. Prerequisite: SOC 101 or 301 or instructor approval.

*General Studies: SB*

### **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*



The ASU marching band participates in the Homecoming Parade.

Tim Trumble photo

### **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)**

*spring*

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.

### **SOC 485 Sociology of Knowledge. (3)**

*selected semesters*

Relationship between social conditions and the development of knowledge in modern society. Prerequisite: SOC 101 or 301 or instructor approval.

*General Studies: L-SB*

### **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*

### **SOC 500 Research Methods. (1-12)**

*spring*

### **SOC 501 Practicum in Survey Research. (3)**

*fall*

Research practicum in survey field work, analysis, and reporting in the Phoenix Area Study. Prerequisite: SOC 391 (or its equivalent).

### **SOC 502 Practicum in Survey Research. (3)**

*spring*

Continuation of SOC 501. Prerequisite: SOC 501.

### **SOC 503 Sociology as a Profession I. (1)**

*fall*

Becoming and working as a sociologist, including how to write a vita, choose a thesis topic, or find dissertation data. Prerequisite: graduate Sociology major.

### **SOC 504 Sociology as a Profession II. (1)**

*spring*

Becoming and working as a sociologist, including how to write a vita, choose a thesis topic, or find dissertation data. Prerequisite: graduate Sociology major.

### **SOC 505 Applied Regression Analysis. (3)**

*fall and spring*

Multiple linear regression topics relevant to sociological data analysis. Computer applications. Prerequisites: SOC 390 (or its equivalent); proficiency examination.

### **SOC 507 Social Statistics IIA: Categorical Data Analysis. (3)**

*fall or spring*

Logistic regression and related topics relevant to categorical data analysis in sociology. Computer applications. Prerequisite: SOC 505 or instructor approval.

### **SOC 508 Social Statistics IIB: Structural Equation Analysis. (3)**

*fall or spring*

Teaches structural equation models using LISREL and other computer packages. Topics include multiple group analyses and ordinal endogenous variable models. Prerequisite: SOC 505 or instructor approval.

### **SOC 509 Social Statistics IIC: Event History Analysis. (3)**

*fall or spring*

Proportional hazards models and other methods for analyzing longitudinal data and establishing hazard rates of events for exploratory variables. Prerequisite: SOC 505 (or its equivalent).

**DEPARTMENT OF SPEECH AND HEARING SCIENCE**

- SOC 515 Studies of the Family. (3)**  
*spring*  
 Current development in the study of marriage and the family. Prerequisite: instructor approval.
- SOC 585 Development of Sociology. (3)**  
*fall*  
 Major sociological theorists including Durkheim, Weber, Marx, Parsons, Merton, Dahrendorf, Homans, and Mead. Prerequisite: instructor approval.
- SOC 586 Contemporary Sociological Theory (3)**  
*spring*  
 Analyzes major theories including structural functionalism, conflict sociology, exchange, symbolic interaction, and role theory. Prerequisite: instructor approval.
- SOC 587 Contemporary Issues in Sociology. (3)**  
*selected semesters*  
 Philosophy of social science, contemporary issues in sociology, the theory and methods. Prerequisite: instructor approval.
- SOC 588 Methodological Issues in Sociology (3)**  
*fall*  
 Basic methodological issues in the application of scientific methods to the study of human social life. Empirical studies, number of major works with contrasting approaches to issues.
- SOC 599 Thesis. (1-12)**  
*selected semesters*
- Omnibus Courses** For an explanation of courses offered but not specifically listed in this catalog, see Omnibus Courses page 56.

**Department of Speech and Hearing Science**

www.asu.edu/cلاس shs  
 480 965-2374  
 LL 173A

**David Ingram, Chair**

- Professors:** S. Bacon, Dorman, D. Ingram, S. Rex, Wilcox
- Associate Professor:** Liss
- Assistant Professors:** Azuma, Gray
- Clinical Professor:** Mathy
- Clinical Associate Professors:** C. Bacon, Brown, M. Nitz, Remson
- Clinical Assistant Professors:** K. Ingram, McBr. de Wexler
- Lecturers:** Amann, Barto, Howard, O'Brien, Quinn, R. Ggs, 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 SB 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 485 Observation 1  
 SHS 465 Speech and Language Acquisition SB 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 SG 4  
 MAT 170 Precalculus MA 3  
 PGS 101 Introduction to Psychology SB 3  
 PHY 101 Introduction to Physics SQ 4  
 PSY 230 Introduction to Statistics CS 3
- Total** 17

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 SB 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 401 Introduction to Audiologic Evaluation 3  
 SHS 402 Modifying Communicative Behavior 3  
 SHS 431 Developmental Speech Disorders 3  
 SHS 465 Speech and Language Acquisition SB 3  
 SHS 470 Developmental Language Disorders 3  
 SHS 485 Acquired Speech and Language Disorders 3  
 SHS 496 Aural Rehabilitation 3

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 course SQ natural science—quantitative CU cultural diversity the United States G global history/career See General Student Page 83

## COLLEGE OF LIBERAL ARTS AND SCIENCES

### GRADUATE PROGRAMS

The faculty in the Department of Speech and Hearing Science offer programs leading to the M.S. degree in Communication Disorders and 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)

*fa and spring*

Basic receptive expressive conversational skills basic grammar and syntax rules Orientation to deafness and deaf culture Lecture direct practice lab

##### SHS 102 American Sign Language II. (4)

*fa and spring*

Further development of receptive expressive conversational skills in ASL finger spelling Continued explanation of deaf culture lecture direct practice lab Prerequisite SHS 101

##### SHS 105 Introduction to Human Communication Disorders. (3)

*fa and spring*

Introduces hearing impairment and speech problem children and adult Lecture demonstration

##### SHS 201 American Sign Language III. (4)

*fa and spring*

Continued development of fluency in ASL with emphasis on more abstract concepts and the ability to narrate events Lecture discussion direct practice lab Prerequisite with a grade of C or higher SHS 102

##### SHS 202 American Sign Language IV. (4)

*fa and spring*

Further development of fluency in ASL with emphasis on literature, folklore and sign language arrangements with multiple characters lecture discussion direct practice lab Prerequisite with a grade of C or higher SHS 201

##### SHS 250 Introduction to Phonetics. (3)

*fa*

Introduces English phonetics with emphasis on phonetic transcription articulation phonology and disorders of speech

##### SHS 310 Anatomical and Physiological Bases of Speech. (3)

*fa*

Noncadaveric study of anatomical system 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)

*fa*

Study of 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)

*fa and spring*

Speech and language development and strategies for facilitating communication skills in early childhood educational settings

##### SHS 367 Language Science. (3)

*fa*

Normative aspects and integration of language structure components and products 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)

*fa*

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)

*fa*

Measurement of the basic audiologic test battery including audiograms immittance masking and speech recognition Prerequisites SHS 311 and 376 and 384 or the equivalents

##### SHS 402 Modifying Communicative Behavior. (3)

*fa*

Principles and techniques of modifying speech and language behavior Prerequisite SHS 250 or the equivalent

##### SHS 431 Developmental Speech Disorders. (3)

*fa*

Introduces the nature of articulation fluency resonance and voice disorders in childhood Prerequisite SHS 250 and 310 or the equivalent

##### SHS 450 Observation. (1)

*fa and spring*

Opportunity to obtain observation experience at the ASL 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 the equivalent

*General Studies SB*

##### SHS 470 Developmental Language Disorders. (3)

*fa*

Introduces the nature and treatment of language disorders in children Prerequisite SHS 465 or instructor approval

##### SHS 483 Professional Issues in Communication Disorders. (3)

*fa*

Topics related to professional certification accreditation code of ethics graduate education and other issues in speech language pathology and audiology.

##### SHS 485 Acquired Speech and Language Disorders. (3)

*spring*

Introduces acquired speech and language disorders across the lifespan Prerequisite SHS 250, 311

##### SHS 494 Special Topics. (1–4)

*fa 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 the equivalents

##### SHS 501 Introduction to Audiologic Evaluation. (3)

*fa*

Measurement of the basic audiologic test battery including audiograms immittance masking and speech recognition Prerequisites SHS 311 and 376 and 384 or the equivalents

##### SHS 502 Differential Diagnosis for Audiology. (4)

*fa*

Differential diagnosis of cochlear and retrocochlear disorders and assessment of vestibular system. 3 hours lecture 2 hours lab Prerequisite SHS 401 or 501 or the equivalent

##### SHS 504 Hearing Aids. (4)

*fa*

Operation application and fitting of amplification devices for the hearing impaired 3 hours lecture 2 hours lab Prerequisite SHS 411 or 501 or the equivalent

##### SHS 508 Pediatric Audioogy. (3)

*fa*

Audiologic assessment screening and development considerations for infants and young children Prerequisite SHS 401 or 501 or the equivalent

**SHS 511 Auditory Perception by the Hearing Impaired. (3)**

*fa*  
Studies how and why sensor neural hearing loss affects the perception of sound. Prerequisite: SHS 376 or instructor approval

**SHS 512 Medical Aspects of Speech and Hearing. (3)**

*spring*  
Correlation of history and physical findings with pathologic physiology and test results in speech and hearing abnormalities

**SHS 515 Audiologic Instrumentation and Calibration. (3)**

*fa*  
Electronic instruments used to produce, modify, and measure characteristics of sound. Measurement standards and methods for calibration of audiologic equipment. Lecture/lab. Prerequisite: SHS 401 or 501 or its equivalent

**SHS 516 Auditory-Evoked Potentials. (4)**

*spring*  
Continuation of SHS 502 including electrophysiologic assessment of peripheral and central auditory nervous system. Lecture/lab. Prerequisite: SHS 502

**SHS 545 Speech Perception by the Hearing Impaired. (3)**

*fa*  
Speech perceptual problems of the hearing impaired including those who have cochlear implants. Prerequisite: SHS 375 or instructor approval

**SHS 552 Otoacoustic Emissions as a Diagnostic Tool. (3)**

*spring*  
Studies the types of otoacoustic emissions, the theoretical calculations and application to clinical diagnosis. Lecture/discussion/lab. Prerequisite: SHS 376 or instructor approval

**SHS 555 Cochlear Implants. (3)**

*spring*  
Current status of cochlear implant research and development. Prerequisite: both SHS 504 and 545 or on instructor approval

**SHS 565 Speech and Language Acquisition. (3)**

*spring*  
Speech and language development in the normal child. Prerequisite: SHS 367 or its equivalent

**SHS 566 Psychology of Language. (3)**

*spring*  
Psycholinguistic study of the production and comprehension of language across the lifespan

**SHS 567 Neural Bases of Communication Disorders. (3)**

*fa*  
Neuroscience and its application to matters of normal and disordered communication. Prerequisite: SHS 310 or its equivalent

**SHS 570 Communication Disorders and Multicultural Populations. (3)**

*spring*  
Studies racial and ethnic bases and the communication behaviors and disorders in various cultural groups

**SHS 571 Augmentative Communication and Language Programming. (3)**

*fa*  
Focuses on individuals across the age span who are unable or who are at risk for being unable to communicate with spoken language. Lecture/lab

**SHS 572 Language Assessment and Intervention in Early Childhood. (3)**

*fa*  
Focuses on the birth to 5 year old population who are at risk for or who have communication and language disabilities. Prerequisite: SHS 470 or its equivalent

**SHS 573 Language Assessment and Intervention with School-Age Populations. (3)**

*spring*  
Focuses on later language development, linguistic demands of academic settings, assessment and intervention strategies for older children and adolescents. Prerequisite: SHS 565 or its equivalent

**SHS 574 Fluency Disorders and Treatment. (3)**

*fa*  
Presents phenomena, etiology, assessment, and theories of stuttering followed by various treatment procedures for children and adults who stutter. Prerequisite: SHS 431 or its equivalent

**SHS 575 Aphasia and Related Neurogenic Language Disorders. (3)**

*fa*  
Assessment and treatment of acquired neurogenic impairment. Prerequisite: SHS 567

**SHS 576 Neuromotor Speech Disorders. (3)**

*spring*  
Evaluation and treatment of the dysarthrias and apraxia of speech. Emphasizes acquired adult disorders

**SHS 577 Craniofacial Disorders of Communication. (3)**

*spring*  
Communication disorders related to anomalies of the craniofacial structures including orofacial clefting of the lip and palate. Prerequisite: SHS 310 or its equivalent

**SHS 578 Disorders of Voice. (3)**

*summer*  
Communication disorders related to dysfunction of the phonatory and resonance systems of voice production, assessment, and treatment. Prerequisite: SHS 310 or instructor approval

**SHS 579 Feeding and Swallowing Disorders Across the Lifespan. (3)**

*fa*  
Focuses on individuals across the age span who have feeding and or swallowing disorders. Presents assessment and treatment strategies. Prerequisite: SHS 567

**SHS 580 Clinical Practicum. (1-6)**

*fa spring summer*  
Supervised practicum in audiology or speech language pathology. 1 hour staffing and 3 hours of client contact per week per hour of credit. May be repeated for credit. Prerequisite: instructor approval; student must not have previous admission status

**SHS 581 Right Hemisphere Syndrome, Traumatic Brain Injury, and Dementia. (3)**

*spring*  
Studies the nature, characteristics, and clinical management of cognitive and communicative impairments accompanying right hemisphere damage, TBI, and dementia. Prerequisite: SHS 567

**SHS 582 Differential Diagnosis of Communication Disorders. (3)**

*spring*  
Procedures for assessing speech language disorders in children and adults. 3 hours lecture, 2 hours lab. Prerequisite: SHS 250 and 310 and 465 and 567 or their equivalents.

**SHS 584 Internship. (1-6)**

*fa spring summer*  
Off-campus directed experiences in audiology or speech language pathology. May be repeated for credit. Prerequisite: SHS 580; student must consult with coordinator before registration

**SHS 585 Articulation and Phonology: Assessment and Intervention. (3)**

*spring*  
Assessment and treatment of developmental articulation and phonological disorders. Prerequisite: SHS 250 and 310 or their equivalents

**SHS 591 Seminar. (1-12)**

*fa spring summer*  
Topics may include the following:  
• Central Auditory Mechanisms and Learning Impairment 3

*spring*  
• Cognitive and Linguistic Interactions in Adult Neurogenic Disorders. 3

*fa*  
• Fundamentals of Vestibular Evaluations 3

*fa*  
• Research Methods in Communication Disorders 3

*spring*

Literacy and critical inquiry: **MA** mathematics, **CS** computer statistics, quantitative application, **HU** humanities and fine arts, **SB** social and behavioral science, **SG** natural science—general core courses, **SQ** natural science—quantitative, **C** cultural diversity in the United States, **G** global history/culture. See "General Studies," page 83

## COLLEGE OF LIBERAL ARTS AND SCIENCES

### SHS 596 Aural Rehabilitation. (3)

*spring*

Approaches to aural rehabilitation for children and adults introduces educational audiology and assistive listening devices Prerequisite: SHS 401 or 501 or its equivalent

### SHS 792 Research. (1-12)

*selected semesters*

### SHS 799 Dissertation. (1-15)

*selected semesters*

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog see Omnibus Courses, page 56

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## Women's Studies Program

[www.asu.edu/classes/womens\\_studies](http://www.asu.edu/classes/womens_studies)

480-965-2358

ECA 209

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**Kathleen J. Ferraro, Director**

### CORE FACULTY

Professors: Kobetz, Rothschild  
Associate Professors: Ferraro, Scherner  
Assistant Professors: Anderson, Leong, Lind

### AFFILIATED FACULTY

#### Anthropology

Professors: Brandt, Koss, Chono

#### Architecture

Assistant Professor: Fish Ewan

#### Art

Professors: Code, Fahman, Magenta  
Associate Professors: Schef, Wolftha

#### Asian Pacific American Studies

Assistant Professor: de Jesus

#### Chicana and Chicano Studies

Assistant Professor: Gutierrez

#### Curriculum and Instruction

Professors: Ede, Guzzett

#### English

Professors: Adams, Crowley, Gutierrez, Lightfoot, Nisen, Rhodes, Richard, Sensibar  
Associate Professors: Chancy, DeLamotte, Horan, Pritchard, Tohe,

Assistant Professors: Webb, Peterson;

Senior Lecturers: Heenan, Norton

#### Exercise and Wellness (ASU East)

Associate Professor: Swan

#### Exercise Science and Physical Education

Professor Emerita: Weiss

#### Family and Human Development

Professor: Martin

### Geography

Professor: Burns

### History

Professors: Fuchs, Lavrin, Warncke;  
Associate Professors: Gray, Guett, Stoner

### Human Communication

Professors: Carlson, Nakayama, Valentine  
Assistant Professors: Davis, Martinez

### Interdisciplinary Studies

Lecturer: Nelson

### Justice Studies

Professors: Jurk, Romero, Zatz  
Associate Professor: Menjivar  
Assistant Professor: Adelman

### Languages and Literatures

Regents Professor: Foster  
Professors: Losse, Williams;  
Associate Professors: Pritchard, Tompkins;  
Assistant Professors: Cho, George, Gruznska-Rees, Orlich

### Management

Associate Professor: Cook

### Music

Professor: Wamsom

### Philosophy

Associate Professor: McGregor

### Psychology

Regents' Professors: Eisenberg, Russo;  
Professor: Chassin  
Associate Professor: Saenz

### Psychology in Education

Professors: Bernstein, Hackett, Kerr  
Professor Emerita: McSaac;  
Associate Professor: Moore

### Recreation Management and Tourism

Professor: Ason

### Religious Studies

Professor: Feidhaus  
Associate Professor: Fessenden

### Social Work

Professors: Coudrogu, Segal,  
Associate Professors: Brzuzynski, Gerdes,  
Assistant Professor: Hurd

### Sociology

Professors: Kronenfeld, Kus, Weitz  
Associate Professors: Benjamin, Mer, Loess;  
Assistant Professor: Agadjanian

### Theatre

Professor: Knapp,  
Assistant Professor: Woodson

### Women's Studies (ASU West)

Professor: Stage

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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" or higher, of which 33 must be taken from WST or WSH prefixes or from other prefixes designated as part of the major. The other 12 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 the following 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 Creation of Feminist Consciousness <i>L, C</i> . . . . .	3
WST 378 Contemporary Feminist Theory <i>L, C</i> . . . . .	3
WST 484 Internship . . . . .	3
WST 495 PS: Theoretical Issues in Women's Studies <i>L</i> . . . . .	3
Total . . . . .	15

Students must also complete two other courses: (1) an upper division course that provides a humanities or fine arts perspective on the lives and contributions of women; and (2) an upper division course on women in non-Western societies or a course on minority or ethnic women in American society.

A list of approved courses is available each term in the program office.

**Related Fields.** Students must complete nine semester hours in fields related to WST chosen from cross-listed or interdisciplinary courses or in consultation with the Women's Studies advisor.

**Electives in Closely Related Fields.** Majors must complete 12 hours of courses in fields closely related to women's studies. These courses may be used to satisfy university General Studies requirements and graduation requirements in the College of Liberal Arts and Sciences. WST and WSH courses may not be used as related fields.

**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 Creation of Feminist Consciousness <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 339, for a description of the certificate program.

**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 Culture: Images and Realities. (3)**

*spring*  
Explores aspects of lesbian experience from sociological, psychological, historical, political, and literary/critical 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 various 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*

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog, see Omnibus Courses, page 56.

**L** liberal arts and critical inquiry **MA** mathematics **CS** computer/information technology **quantitative** application **HU** humanities **df** degrees **SB** social and behavioral sciences **SG** natural sciences—general core courses **SQ** natural science **quantitative** **C** cultural diversity in the United States **G** global **H** history. See General Studies, page 3.

## COLLEGE OF LIBERAL ARTS AND SCIENCES

### 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 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.

#### 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)

*fall and spring*

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)

*fall and 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 Creation of Feminist Consciousness. (3)

*fall*

Explores the development of feminist theory from its roots to 1960. 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 457 Gender, Culture, and Development. (3)

*fall and 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 and 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*

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 498 PS: Theoretical Issues in Women's Studies. (3)

*fall and spring*

Reading and research on important theoretical issues in women's studies. Prerequisite: WST 100 or 300 or instructor approval.

*General Studies: L*

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.



Gammage Auditorium, designed by Frank Lloyd Wright, regularly hosts touring Broadway productions.

Tim Frumby photo

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# College of Nursing

nursing.asu.edu

Barbara Durand, Ed.D., Dean

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## 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 activity that strengthen the knowledge base of the discipline, improve theory-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 degree in Nursing (M.S.) 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 certificate program is also available.

The college also participates with the University of Arizona in offering the Master of Public Health (M.P.H.) degree and a combined M.P.H./M.S. degrees program.

## 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 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 as well as information regarding application materials and deadlines.

**Transfer Credits.** While the university 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 of Nursing 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 10 years before the date of application.

**Professional Program Admission.** Individuals interested in applying to the professional program must receive admission 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 480-965-298 for details. Students are eligible for consideration

L iteracy and r it a q ry MA athemat CS mputer tat t s  
quantatve app at n HU human t s and fine arts SB oca a d  
beha ra cen e SG natur ce e—gene a core cou se SQ natura  
cen e q antatve C tr dver ty the ted State G goba  
H h t a See Ge er St de ace 8

## COLLEGE OF NURSING

for admission to the professional program if they meet the following criteria:

1. regular admission to the College of Nursing at ASU Main as a premajor Nursing student;
2. good standing with ASU and the College of Nursing;
3. minimum prerequisite GPA of 2.75;
4. completion of designated prerequisite courses with an earned grade of "C" 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; and
8. submission of other required materials.

Admission is selective and based on available resources. Meeting the minimum prerequisite GPA does not ensure admission. A qualified applicant 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 class one fingerprint clearance card;
5. removal of all ASU admission deficiencies; and
6. other required material.

Professional program courses are offered at ASU Main 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 direct and group patient care are available in a variety of settings, community clinics; health fairs and screenings; 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 or Nursing students (see "Undergraduate Admission," page 58) 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 473, 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 resume;
3. statement of career goals;
4. letters of reference;
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;
2. transcripts from all colleges attended; and
3. all other admission requirements as outlined under "Admission," page 473.

**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 certification 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, rubella, and 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.

An annual flu vaccine is recommended and other health information may also be required.

A student may not participate in any clinical experience without meeting these requirements

**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 58, and "Immunization Requirements," page 64

**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 program requirements. Advisors are available by appointment in the College of Nursing Student Services Office. Visit NUR 108, or call 480 965 2987. 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. In general, all students are encouraged to meet with an advisor each semester. All stu-

dents 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 two to three days in practicum experience. The remaining eight semester hours reflect classroom hours requiring preparation and study. It is suggested that any additional 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 general 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, healthy 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;
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;

Literacy and Inquiry MA mathematics CS computer statistics quantitative aptitude HU humanities and fine arts SB social and behavioral science SG natural and environmental science SQ natural science qualitative C diversity in the United States G global history See General Studies page 83

## COLLEGE OF NURSING

- 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 on 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 nursing course degree requirements 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. Satisfactory completion of all general education and nursing prerequisite courses with a grade of “C” 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 474.

**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” or higher that apply toward their baccalaureate degree. Satisfactory completion of all general education and nursing prerequisite courses with a grade of “C” or higher and an earned minimum prerequisite GPA of 3.00 is required. See “Admission of Registered Nurses (RNs),” page 474.

The RN to master’s degree program requires students to complete a minimum of 30 semester hours with a grade of “B” 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 adult health nursing with tracks in the primary care of chronically ill adults or acute care; community health nursing with options in the Master of Public Health dual degree program; community mental health psychiatric nursing; family health nursing; women’s health; and parent child

nursing with the tracks of the childbearing family, nursing of children, and neonatal program. The program requires a minimum of 40 semester hours with an earned grade of “B” 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 521) 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 at ASU: (1) Community health practice is coordinated by the College of Nursing, and (2) health administration and policy is coordinated by the School of Health Administration and Policy. Students may also select a joint M.P.H./M.S. degrees option. 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 79.

#### First-Year Composition Requirement

Completion of both ENG 101 and 102 or ENG 105 or equivalent with a grade of “C” 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 83. Note that all three General Studies awareness areas are required. Consult your 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 86, in the course descriptions, in the *Schedule of Classes*, and in the *Summer Sessions Bulletin*.

### COLLEGE DEGREE REQUIREMENTS

College requirements for graduation are consistent with those of the university. 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 (RNs),” page 477.

BIO 201 Human Anatomy and Physiology I SG	4
BIO 202 Human Anatomy and Physiology II	4
CDE 232 Human Development SB	3
CHM 101 Introductory Chemistry SQ	4
ENG 101 First Year Composition	3
ENG 102 First Year Composition	3
HCR 210 Clinical Health Care Ethics HU	3
HCR 220 Health Care Organizations L	3
HCR 230 Culture and Health C, G	3
HCR 240 Human Pathophysiology	4
MAT 117 College Algebra MA	3
MIC 205 Microbiology SG	3
MIC 206 Microbiology Laboratory SG	3
NTR 241 Human Nutrition	3
PGS 101 Introduction to Psychology SB	3
PHI 103 Principles of Sound Reasoning L HU	3
Health elective	3
CS statistics elective	3
Total prerequisites	56

**MAJOR REQUIREMENTS**

The Nursing major requirements are completed after admission to the professional program. All practice courses are graded pass/fail. RN students should refer to "RN B.S.N. Degree Requirements (RN's)" on this page.

**Nursing Core Courses**

**Junior Year**

<b>First Semester</b>	
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
<b>Second Semester</b>	
NUR 342 Theory I Health Integrity and Alterations	5
NUR 362 Professional Development II Nursing Research L	3
NUR 382 Nursing Practice II	8
Total	16

**Senior Year**

<b>First Semester</b>	
NUR 441 Theory III Health Integrity and Alterations	6
NUR 461 Professional Development III The Art of Nursing HU	3
NUR 481 Nursing Practice III	7
Total	16
<b>Second Semester</b>	
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 (RN's)**

**Prerequisite Course Requirements**

BIO 201 Human Anatomy and Physiology I SG	4
BIO 202 Human Anatomy and Physiology II	4
CDE 232 Human Development SB	3
CHM 101 Introductory Chemistry SQ	4
ENG 101 First Year Composition	3
ENG 102 First Year Composition	3
HCR 240 Human Pathophysiology	4
MAT 117 College Algebra MA	3
MIC 205 Microbiology SG	3
MIC 206 Microbiology Laboratory SG	3
NTR 241 Human Nutrition	3
NUR 341 Theory I Health Integrity	4
NUR 342 Theory II Health Integrity and Alterations*	5
NUR 391 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 SB	3
Health elective	3
CS statistics elective	3
HU elective	3
Total prerequisites	76

\* For alternatives, see an advisor.

**General Education Courses**

Electives upper division	6
Gen course upper division	3
Total	9

**Professional Nursing Courses for RN's.** The following nursing courses are listed in order of course progression and are taught one day a week over a period of 12 months. Practice course scheduling may vary (e.g., day of week, time of day) and requires additional time commitment for about five months of the year

NUR 362 Professional Development II Nursing Research L	3
NUR 391 Registered Nurse Mobility I Professional Development L	3
NUR 392 Registered Nurse Mobility II Health and Wellness	3
NUR 441 Theory III Health Integrity and Alterations	6
NUR 442 Theory IV Health Integrity and Alterations	3
NUR 443 Theory V Leadership and Management	3
NUR 461 Professional Development III The Art of Nursing HU	3
NUR 462 Professional Development IV	2
NUR 495 Community Health Home Health Practice for RN's	4
NUR 496 Leadership and Management Practice for RN's	3
Total	35
General elective total	9

Nursing core RN total 44

RN's interested in pursuing the RN M.S. track should contact an advisor in the College of Nursing Student Services Office.

L liberal arts and inquiry MA mathematics CS computer quantitative application HU human and fine art SB social and behavioral sciences SG natural science general core course SQ natural science quantitative C ultra diversity in the natural world G global health care See Generation 21 page 83

## COLLEGE OF NURSING

### 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" in all prerequisite courses and earning a minimum GPA of 2.75 in prerequisite courses. In addition, a grade of "C" or higher is required in all course work for the degree except in nursing practice courses where a designation of a "pass" 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" or "E" (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 final grade reported as an "E3" or "E9" is considered to have failed the course.

Any petition for curriculum adjustment, course substitution, over load, readmission to a nursing course, or readmission to the professional program must be approved by the College Standards Committee.

Withdrawals in accordance with the withdrawal policy of the university. 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 progress on in the professional program is permitted. A grade of "I" is not allowed in clinical courses. See "Grading System," page 72, 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 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 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. Lab 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 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 of Nursing 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 and other off-campus locations. Instruction is also available via the Internet, CD ROM, and other technology-based means. These offerings are designed to assist practicing profes-

sional nurses in maintaining and enhancing their competencies, to broaden their scientific knowledge base, and to enhance their skills in adapting to the changing health care environment. Programs are organized in response to both the health care needs of the population 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. The program also delivers on site education. 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. Students may obtain the health examinations and immunizations required for admission to the professional program at the clinic's facility. The facility also serves as a learning laboratory 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. 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 regarding scholarships and loans, see "Financial Aid," page 52. Information about scholarship and loan funds 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, as well as a complex care unit. The LRC also has audiovisual equipment, videos, other visual aides, and a variety of computers, and 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 health, and other agencies. The College of Nursing has contracts with more than 250 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.

**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. It provides programs information, and orientation services for graduate students and complements their academic experiences.

**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 either the Air Force or Army ROTC programs are required to 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 degree requirements. ROTC students must meet all of the degree requirements of the college.

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H h i s t o r a S e e "G e n e r a t u d e s" p a g e 83

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**College of Nursing**

www.asu.edu/nursing

480 965-3244

NUR 322

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**Barbara A. Durand, Dean**

**Professors:** Durand Feury Ga e, Kdd, Mattson, Perry Thurber

**Associate Professors:** Adams, A pers, Br hart Cesarott Drksen smeurt, K een, Komnen ch, McCarthy, Pr mas Rodr guez

**Assistant Professors:** Long McGrath Pickens, Sehested. Shearer Sousa Tann, Zunke

**Clinical Professor:** Be

**Clinical Associate Professors:** Beck Fargotste n Hagler Jasper Kastenbaum Morris St we White

**Clinical Assistant Professors:** P Johnson W Johnson Nunez, Say es, Shearman Wotr'ng

**Instructor:** Rosdah

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**COMMUNITY HEALTH PRACTICE (CHP)**

See the *Graduate Catalog*, for the CHP courses.

**HEALTH CARE RELATED (HCR)**

**HCR 210 Clinical Health Care Ethics (3)**

*fa spring summer*

Health care ethics emphasizing analysis and ethical decisions on making action and health policy decisions for health care professionals Prerequisites: ENG 101 2

*Genera Studies: HU*

**HCR 220 Health Care Organizations. (3)**

*fa 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 awarded for only HCR 220 or HSA 220 Prerequisite both ENG 101 and 1 2 or only ENG 05

*Genera Studies: L*

**HCR 230 Culture and Health. (3)**

*fa and spring*

Cultures of diverse groups and healthness sociocultural communication awareness sociocultural influences and generational differences in health practices

*Genera Studies: C G*

**HCR 240 Human Pathophysiology. (4)**

*fa and spring*

Chemical biological and psychological processes used in study of structural and functional alterations in health with selected therapeutics Prerequisites: BIO 201 and 202 and M C 2 5 and 2 6 or the required equivalents

**Omnibus Courses.** For the preparation of course offered but not specifically stated in this catalog see Omnibus Courses, page 56

**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 hour lecture 3 hours lab Fee Prerequisite: admission to graduate Nursing program

**NUR 341 Theory I: Health Integrity. (4)**

*fa and spring*

Concepts related to health integrity with focus on individual clients Fee Prerequisite: admission to professional Nursing program Prerequisites: NUR 351 361 381

**NUR 342 Theory II: Health Integrity and Alterations. (5)**

*fa and spring*

Concepts related to selected alterations in health integrity with focus on individual families, and groups Fee Prerequisite: Junior or courses Prerequisites: NUR 362 382

**NUR 351 Pharmacology in Nursing. (3)**

*fa and p ng*

Foundations of pharmacology and interventions Prerequisite: admission to professional Nursing program

**NUR 361 Professional Development I. (2)**

*fa and sp g*

Introduces professional nursing role and esponse Prerequisite: admission to professional Nursing program

**NUR 362 Professional Development II: Nursing Research. (3)**

*fa and spring*

Introduces concepts and issues in nursing research Emphasizes quantitative and qualitative research processes examination of nursing research literature Prerequisite: Junior or admission to RN BSN program

*Genera Studies: L*

**NUR 381 Nursing Practice I. (7)**

*fa 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 Prerequisite: NUR 341 351 361

**NUR 382 Nursing Practice II. (8)**

*fa and spring*

Applies nursing process with selected individual families and groups experiencing alterations in health integrity Lab clinical experience Fee Prerequisite: Junior or Prerequisites: NUR 342 362

**NUR 391 Registered Nurse Mobility I: Professional Development. (3)**

*fa and spring*

Historical philosophy and theoretical bases for professional nursing practice Enhancement of critical analytical skills through exploration of selected issues Prerequisite: admission to RN BSN program

*Genera Studies: L*

**NUR 392 Registered Nurse Mobility II: Health and Wellness. (3)**

*fa and spring*

Concepts of health integrity and community based practice and professional nursing roles C requisite for RNs NUR 391

**NUR 441 Theory III: Health Integrity and Alterations. (6)**

*fa and spring*

Concepts related to health integrity and alterations with focus on individual families groups aggregate and communities Fee Prerequisite: Junior Prerequisite for RNs: NUR 392 Prerequisites: NUR 461 481

**NUR 442 Theory IV: Health Integrity and Alterations. (3)**

*fa and spring*

Advanced concepts related to health integrity and alterations in that integrity with focus on selected client population Fee Prerequisite: Senior Prerequisite for RNs: NUR 495 Prerequisite: NUR 443 462 482

**NUR 443 Theory V: Leadership and Management. (3)**

*fa and spring*

Selected theories and concepts of organizations management leadership with focus on nursing management and leadership health care organizations Prerequisite: Senior or Prerequisites: NUR 442 462 482 Prerequisite for RNs: NUR 495.

**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 aesthetics, ethical and personal patterns of nursing Prerequisite unit or admission to RN BSN program *General Studies: HU*

**NUR 462 Professional Development IV. (2)***fall and spring*

Focuses on rotations to professional nursing Prerequisite Senior 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 individual, family, groups, aggregates, communities Lab clinical experiences Fee Prerequisite Junior (Prerequisite or corequisites NUR 441 461)

**NUR 482 Nursing Practice IV. (8)***fall and spring*

Capstone course with focus on synthesis and application of patterns of knowledge and leadership management concepts in collaborative nursing practice Lab clinical experiences Fee Prerequisite Senior or Prerequisite or corequisites NUR 442 443 462

**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 of 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 Prerequisite NUR 392 Corequisite NUR 362

**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 knowledge in nursing practice Clinical lab Corequisite for RNs NUR 495 Prerequisite or corequisite NUR 443

**NUR 500 Research Methods. (3)***fall and spring*

Research methods including research conceptualization and design in nursing Prerequisites admission to graduate Nursing program a graduate level course in inferential statistics prior to enrolling in specialty concentration in clinical courses Corequisite NUR 551

**NUR 501 Advanced Adult Health Assessment/Promotion:****Advanced Theory. (4)***fall*

Expands adult health assessment/promotion skills through knowledge strategies essential for developing and interpreting data Lecture, demonstration Prerequisites a core and flexible core courses except thesis project Prerequisite NUR 580 Advanced Nursing Practicum Adult Health Nursing

**NUR 502 Management and Maintenance of Adults with Chronic Health Alterations: Advanced Theory. (4)***spring*

Includes theory research that guides the management/maintenance of adults with chronic health alterations Emphasize psychophysiological interrelationships Lecture seminar Prerequisites NUR 511 a core and flexible core courses except thesis project Prerequisite NUR 580 Advanced Nursing Practicum Adult Health Nursing

**NUR 503 Management and Maintenance of Adults with Acute Health Alterations: Advanced Theory. (3)***spring*

Emphasizes theoretical research foundations essential for advanced practice/nursing care of adults with acute episodes/alterations in health Lecture seminar Prerequisite NUR 501 Prerequisite or corequisite NUR 580 Advanced Nursing Practicum Adult Health Nursing.

**NUR 510 Community Public Health Nursing Theory and Role. (3)***spring*

Analyzes and synthesizes the theoretical and conceptual basis of community/public health nursing applicable to current and future nursing roles Lecture discussion learner centered strategies Prerequisites: CHP 500 NUR 551 552.

**NUR 521 Community Mental Health Psychiatric Nursing: Advanced Mental Health Assessment. (3)***fall*

Theoretically related to holistic health assessment for the promotion of physical psychological health development/mental health assessments Lecture seminar, lab Prerequisites a core and flexible core courses except thesis project

**NUR 522 Community Mental Health Psychiatric Nursing: Advanced Theory I. (3)***fall*

Analyzes issues, theories, and research in restoration and promotion of mental health Emphasizes development conceptual framework for psychiatric nursing Prerequisites NUR 521, a core and flexible core courses except thesis project Corequisite NUR 580 Advanced Nursing Practicum Community Mental Health Psychiatry Nursing

**NUR 523 Community Mental Health Psychiatric Nursing: Advanced Theory II. (3)***spring*

Focuses on development of theoretical basis for intervention and a knowledge base for collaboration and consultation in the mental health area Prerequisites NUR 522, a core and flexible core courses except thesis project. Corequisite NUR 580 Advanced Nursing Practicum Community Mental Health Psychiatry Nursing

**NUR 524 Psychoneuroimmunology Approaches to Practice. (3)***summer*

Overview of theories, concepts and research psychoneuroimmunology including physiological aspects and application to a holistic nursing mode Seminar Prerequisite admission to graduate Nursing program

**NUR 525 Neonatal Pediatric Physiology and Embryology. (3)***fall*

Prepares advanced practice nurses to use embryology, genetics and physiology concepts within the nursing process in the care of pediatric and neonatal patient Lecture, discussion, participation, video cases studies Prerequisites: a course in undergraduate anatomy and a course in undergraduate physiology.

**NUR 526 Advanced Neonatal Physical Assessment. (4)***fall*

Developmental assessment skills related to neonatal/infant including history taking, physical developmental behavior, uterine, and genetic assessment to provide comprehensive advanced practice neonatal nursing care Lecture seminar discussion case studies Fee Prerequisite instructor approval Corequisite NUR 525

**NUR 527 Neonatal and Pediatric Pharmacology in Nursing Practice. (3)***spring*

Examines and discusses the rationale, action, and therapeutic effect for nursing each class of medications employed in neonatal and pediatric health care Lecture seminar discussion, case studies, clinical Pre or corequisites both NUR 525 and 526 or 558 or instructor approval

Literacy and readiness MA: mathematical CS: computer literacy quantitative application HU: humanities and deaf SB: social and behavioral science SG: student government and leadership SQ: student organization quantitative curriculum in the United States GG: global history See General Studies page 8

## COLLEGE OF NURSING

### **NUR 528 Advanced Developmental and Family-Centered Nursing Care. (4)**

*spring*

Provides the foundation for providing advanced nursing care of children that develops anticipatory supportive family centered and culturally competent Learning seminar, discussion, skills laboratory clinicals Fee Prerequisite: both NUR 525 and 526 or 558 or on instructor approval

### **NUR 531 Nursing of Children: Advanced Theory I. (3)**

*fall*

Focuses on current practices, research, and issues related to health promotion and disease prevention for children and adolescents. Lecture, seminar. Prerequisites: core and flexible core courses except this project. Corequisite: NUR 580 Advanced Nursing Practicum. Parent Child Nursing with Options in Childbearing Family Nursing of Children and Neonatal Nursing.

### **NUR 532 Nursing of Children: Advanced Theory II. (3)**

*spring*

Focuses on concept theories and research as a basis for strategies related to management of illness and maintenance for children. Lecture, seminar. Prerequisites: NUR 531, core and flexible core courses except this project. Corequisite: NUR 580 Advanced Nursing Practicum. Parent Child Nursing with Options in Childbearing Family Nursing of Children and Neonatal Nursing.

### **NUR 533 Nursing of Children with Special Needs: Advanced Theory. (3)**

*spring*

Focuses on concepts, theories and research related to acute and chronic health deviations of children. Lecture, seminar. Prerequisites: NUR 531 or instructor approval, core and flexible core course except this project. Corequisite: NUR 580 Advanced Nursing Practicum. Parent Child Nursing with Options in Childbearing Family Nursing of Children and Neonatal Nursing.

### **NUR 534 Women's Health Advanced Theory I. (4)**

*fall*

Focuses on theories, principles and research related to managing the health of normal, perinatal, women and families. Cooperative learning strategies. Prerequisites: core and flexible core courses except this project. Corequisite: NUR 580 Advanced Nursing Practicum. Women's Health Nursing.

### **NUR 535 Women's Health: Advanced Theory II. (4)**

*spring*

Focuses on management of nursing care for high risk perinatal women and women with common health problems. Cooperative learning strategies. Prerequisites: NUR 534, core and flexible core courses except this project. Corequisite: NUR 580 Advanced Nursing Practicum. Women's Health Nursing.

### **NUR 551 Theoretical Foundations of Advanced Practice Nursing. (3)**

*fall and spring*

Facilitates experiential and exam activities for foundations of advanced nursing practice. Learning seminar. Prerequisite: admission to graduate Nursing program.

### **NUR 552 Health Care Issues and Systems. (3)**

*fall and spring*

Analyzes organization, financial, service delivery and outcomes of the health system. Emphasizes policy issues, roles and consequences for nurses. Lecture, seminar. Prerequisite: admission to graduate Nursing program.

### **NUR 553 Life Span Development. (3)**

*spring*

Critical examination of concepts, theories, issues and research related to developmental periods throughout the lifespan. Analyzes biological and health cognitive psychology and occupational influences. Lecture, discussion. Prerequisite: admission to graduate Nursing program.

### **NUR 554 Population Based Health Care. (3)**

*fall and spring*

Identification and assessment of specific community health needs and health care patterns for target population. Addresses promotion, protection and improvement of health when populations are served. Lecture, seminar. Prerequisite: admission to graduate Nursing program.

### **NUR 558 Advanced Pediatric Health Assessment. (3)**

*spring*

Expansion of basic health assessment skills and development of clinical problem solving skills for advanced practice nurses. Includes assessments of infants, children and adolescents. Lecture, seminar. Prerequisite: admission to graduate Nursing program, undergraduate health assessment within the last five years.

### **NUR 559 Advanced Health Assessment. (3)**

*spring*

Expansion of basic health assessment skills and development of clinical problem solving skills for advanced practice nurses. Includes assessments of infants, children, adolescents and adults. Lecture, seminar. Prerequisite: admission to graduate Nursing program, undergraduate health assessment within the last five years.

### **NUR 561 Advanced Practice Nursing Role. (2)**

*summer*

Focuses on the examination and implementation of the role of the advanced practice nurse. Emphasizing major components and subcomponent of the role. Lecture, seminar. Prerequisite: admission to graduate Nursing program or instructor approval.

### **NUR 562 Family Nurse Practitioner Advanced Theory I: Health Promotion, Management, and Maintenance. (4)**

*fall*

First didactic specialty course. Focuses on concepts and strategies to promote, manage and maintain health of children and family. Prerequisites: core and flexible core courses except this project. Corequisite: NUR 580 Advanced Nursing Practicum. Family Health Nursing.

### **NUR 563 Family Nurse Practitioner Advanced Theory II: Health Promotion, Management, and Maintenance. (4)**

*spring*

Second didactic specialty course utilizing knowledge from previous courses to formulate therapeutic promotion, management and maintenance for individuals across the lifespan. Prerequisite: NUR 562, core and flexible core course except this project. Corequisite: NUR 580 Advanced Nursing Practicum. Family Health Nursing.

### **NUR 564 Applied Pharmacotherapeutics for Advanced Practice. (3)**

*spring*

Expansion course for advanced nurse practitioners to expand knowledge of pharmacotherapeutic concepts and principles. Lecture, discussion. Prerequisite: admission to graduate Nursing program.

### **NUR 565 Applied Physiology Pathophysiology in Advanced Practice. (3)**

*spring*

Advanced nurse practitioner course designed to expand previously acquired anatomy and physiology knowledge and describe pathologic alterations across the lifespan. Lecture, seminar. Prerequisite: Prerequisites: admission to graduate Nursing program, undergraduate anatomy and physiology.

### **NUR 566 Pediatric Physiology Pathophysiology. (3)**

*spring*

Analyzes the patterns of heredity, cellular differentiation and the development of systems in the infant to adolescent. Prerequisite: admission to graduate Nursing program.

### **NUR 571 Teaching in Nursing Programs. (3)**

*selected semesters*

Analyzes theories, issues and research related to teaching in nursing. Focuses on the processes of teaching, learning, seminar, cooperative learning. Prerequisite: graduate standing.

### **NUR 578 Gestalt Therapy I. (3)**

*fall*

Introduces theory and methodology of Gestalt therapy and utilizes for mental health promotion and restoration.

### **NUR 579 Gestalt Therapy II. (3)**

*spring*

Focuses on further development of Gestalt therapy and its application in working with various subpopulations. Prerequisite: NUR 578.

**NUR 580 Practicum. (1–12)**

*selected semesters*

Topics may include the following

- Advanced Nursing Practicum Adult Health Nursing 2–6  
*fa and spring*  
Clinical application of theories, concepts and principles in areas of concentration Conferences Fee Prerequisite admission to graduate nursing program Corequisite: NUR 501 or 502 or 503
- Advanced Nursing Practicum Adult Health Nursing 2–6  
*fa and spring*  
Clinical application of theories, concepts and principles in areas of concentration Conferences Fee Prerequisite admission to graduate nursing program Corequisite: NUR 501 or 502 or 503
- Advanced Nursing Practicum Community Health Nursing 2–6  
*fa and spring*  
Clinical application of theories, concepts and principles in areas of concentration Conferences Prerequisite admission to graduate nursing program Corequisite NUR 510
- Advanced Nursing Practicum Community Mental Health Psychology Nursing 2–6  
*fa and spring*  
Clinical application of theories, concepts and principles in areas of concentration Conferences Prerequisite admission to graduate nursing program Corequisite NUR 522 or 523
- Advanced Nursing Practicum Community Mental Health Psychology Nursing 2–6  
*fa and spring*  
Clinical application of theories, concepts and principles in areas of concentration Conferences Prerequisite admission to graduate nursing program Corequisite NUR 522 or 523
- Advanced Nursing Practicum Family Health Nursing 2–6  
*fa and spring*  
Clinical application of theories, concepts and principles in areas of concentration Conferences Fee Prerequisite admission to graduate nursing program Corequisite NUR 562 or 563
- Advanced Nursing Practicum Family Health Nursing 2–6  
*fa and spring*  
Clinical application of theories, concepts and principles in areas of concentration Conferences Fee Prerequisite admission to graduate nursing program Corequisite NUR 562 or 563
- Advanced Nursing Practicum Parent Child Nursing with Options in Childbearing Family Nursing of Children and Neonatal Nursing 2–6  
*fa and spring*  
Clinical application of theories, concepts and principles in areas of concentration Conferences Fee Prerequisite admission to graduate nursing program Corequisite NUR 531 or 532
- Advanced Nursing Practicum Parent Child Nursing with Options in Childbearing Family Nursing of Children and Neonatal Nursing 2–6  
*fa and spring*  
Clinical application of theories, concepts and principles in areas of concentration Conferences Fee Prerequisite admission to graduate nursing program Corequisite NUR 531 or 532
- Advanced Nursing Practicum Women's Health Nursing 2–6  
*fa and spring*  
Clinical application of theories, concepts and principles in areas of concentration Conferences Prerequisite admission to graduate nursing program Corequisite NUR 534 or 535
- Advanced Nursing Practicum Women's Health Nursing 2–6  
*fa and spring*  
Clinical application of theories, concepts and principles in areas of concentration Conferences Prerequisite admission to graduate nursing program Corequisite NUR 534 or 535
- Practicum Elective 1–4  
*selected semesters*  
Clinical application of theories, concepts and principles such as health promotion, health management, health maintenance, teaching, management and special clinical studies Fee
- Practicum for Teaching 2–6  
*selected semesters*  
Prerequisites: NUR 571–591

**NUR 582 Advanced Human Physiology. (3)**

*fa*

Analyzes major theories and concepts of human physiology. Expresses interrelationships of physiology and health. Prerequisite: admission to graduate nursing program

**NUR 584 Community Health Nursing Internship. (3)**

*spring*

Students operate as a community health nursing public health content leadership roles in a variety of community agencies. Clinical internship. Prerequisite: NUR 580 Advanced Nursing Practicum Community Health Nursing

**NUR 585 Stress Reduction. (3)**

*selected semesters*

Theory application and evaluation of mind/body relaxation methods including physiological effects. Emphasizes research findings. Daily student practice. Prerequisite: graduate standing or instructor approval

**NUR 586 Advanced Pathophysiology. (3)**

*spring*

Manifestation of altered human physiology and disease. Uses systems theory to analyze the relationships of disease and physiology. Prerequisites: NUR 582 admission to graduate nursing program

**NUR 589 Research Utilization. (3)**

*fa and spring*

Emphasizes the synthesis and application of research to an identified clinical nursing problem. Prerequisites: a core and flexible core courses except thesis project. Corequisite: NUR 593

**NUR 590 Reading and Conference. (1–12)**

*selected semesters*

Independent study in which a student meets regularly with a faculty member to discuss assignments such as intensive reading in a specialized area, writing syntheses of literature on a specific topic, writing literature review of a topic. Prerequisite: instructor approval.

**NUR 591 Seminar. (2–4)**

*selected semesters*

Advanced topics, including curriculum development and health promotion. Prerequisite: instructor approval in selected courses

**NUR 593 Applied Project. (1)**

*fa and spring*

Preparation of a supervised applied project that is a graduation requirement in some professional majors. Prerequisites: a core and flexible core courses. Corequisite: NUR 589

**NUR 598 Special Topics. (1–4)**

*selected semesters*

Special study, including issues in health care and organizational management in nursing, ethical issues, and clinical nurse specialties. Topics may include the following

- Advanced Neonatal Theory 4  
*fa*
- Advanced Neonatal Theory 3  
*spring*
- Nursing of Children with Developmental Disabilities 3
- School Nursing Practice 3

**NUR 599 Thesis. (1–6)**

*fa, spring, summer*

Research proposal development, data collection and analysis, thesis writing and the oral defense. Required six-hour. Prerequisites: a core and flexible core courses

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog, see Omnibus Courses, page 56.

Literacy and Technical MA mathematics CS computer statistics quantitative applications HU humanities and life arts SB social and behavioral science SG natural science general education SQ natural and environmental C trade/vocational the national State G global history See General Studies page 83

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# College of Public Programs

www.asu.edu/copp

Anne L. Schneider, Ph.D., Dean

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## 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](http://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 58. 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 79), and
3. the College of Public Programs writing competence, communication, and computer requirements (see "College Degree Requirements," page 486).

The academic units may also have additional requirements. The ASU GPA is computed on ASU courses only and must be based on a *minimum* of nine semester hours of courses with grade options of "A," "B," "C," "D," or "E."

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 completions defined for purpose of transfer as having received a grade comparable to an "A," "B," or "C" 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 on advising should be directed to the student's academic advisor or to the College Student Services Office, WILSN 203.

**Mandatory Advising.** The following categories of students are required to receive advising and to be cared 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 on this page.

## 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 487.

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 the region. 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 three 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 713, or access the Web site at [www.asu.edu/eed](http://www.asu.edu/eed).

## 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" 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" 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 83, 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 85.

Literary and critical inquiry MA mathematics CS computer statistics quantitative application HU humane and liberal SB social and behavioral sciences SG natural science—general courses SQ natural science quantitative Cultural diversity in the United States Global history. See General Studies" page 83.

**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, 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, tourism	Department of Recreation Management and Tourism
Social Work	B.S.W.		School of Social Work

**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 10 Introduction to Human Communication SB	3
COM 225 Public Speaking L	3
COM 231 Small Group Communication SB	3
COM 241 Introduction to Oral Interpretation L HL	
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 L	3
ENG 215 Strategies of Academic Writing L	3
ENG 216 Persuasive Writing on Public Issues L	3
ENG 217 Writing Reflective Essays L	3
ENG 218 Writing About Literature L	3
ENG 301 Writing for the Professions L	3
JMC 201 Journalism News Writing L	3
JMC 202 Radio Television Writing L	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 status (.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, organizational communication	Hugh Downs School of Human Communication
Justice Studies	M.S.		School of Justice Studies
	Ph.D.*	Criminal and juvenile justice; dispute resolution; law, justice, and minority populations; law, policy, and evaluation; women, law, and justice	Committee on Law and Social Sciences
Mass Communication	M.M.C.		Walter Cronkite School of Journalism and Mass Communication
Public Administration	M.P.A.	Public information management, public management, public policy analysis and evaluation, urban management and planning	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; planning, administration, and community practice	School of Social Work
	Ph.D.		School of Social Work

\* This program is administered by the Graduate College.

**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 status 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 Student Services Office regarding procedures and guidance for returning to good standing. When reinstatement includes readmission, application must be made to the Admissions Section of the Office of the Registrar.

All academic discipline action is the function of the College 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 undergraduate 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" section, page 118.

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.

Literary and Critical Inquiry MA Mathematics CS Computer Studies  
 Quantitative Applications HU Humanities and Fine Arts SB Cultural Studies  
 Behavioral Science SG Strategic Studies ER Ethics and Religion SQ Statistics  
 Economics and Finance C International Trade and Development G Global  
 History See General Studies page

## 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 three complementary nonprofit management education programs: the Nonprofit Youth Agency Administration American Humanities Certificate undergraduate, the Nonprofit Management Certificate extended education, and the Nonprofit Leadership and Management Certificate graduate. For more information, call 480 965 1607.

### NONPROFIT LEADERSHIP AND MANAGEMENT (NLM)

See the *Graduate Catalog* for the NLM courses

### Center for Urban Inquiry

The Center for Urban Inquiry focuses on civic involvement. The center's mission is to examine the unique features of the new urban West in the United States, particularly intersections of growth and development with citizen activism and community building. By harnessing the unique resources of the university, the center engages in partnerships with urban citizens, including youths, to increase awareness, promote inclusion, and address needs. Center programs include seed grants to students working in teams in pursuit of urban research and community service; service learning that involves students in community building; technical assistance to neighborhood organizations, schools, and hospitals, and the production of works that appeal broadly to urban audiences, including performances, exhibits, and videos.

For more information, call 480 965 9216, or access the Web site at [www.asu.edu/cpp/urban](http://www.asu.edu/cpp/urban).

### 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)

*see elected semesters*

**CPP 294 Special Topics.** (1–4)

*see elected semesters*

**CPP 394 Special Topics.** (1–4)

*see elected semesters*

**CPP 484 Internship.** (1 12)

*see elected semesters*

**CPP 494 Special Topics.** (1–4)

*see elected semesters*

**CPP 498 Pro-Seminar.** (1 7)

*see elected semesters*

**CPP 499 Individualized Instruction.** (1 3)

*see elected semesters*

**CPP 580 Practicum.** (1 12)

*see elected semesters*

**CPP 583 Field Work.** (1 12)

*see elected semesters*

**CPP 584 Internship.** (1 12)

*see elected semesters*

**CPP 590 Reading and Conference.** (1–12)

*see elected semesters*

**CPP 591 Seminar.** (1–12)

*see elected semesters*

**CPP 593 Applied Project.** (1 12)

*see elected semesters*

**CPP 594 Conference and Workshop.** (1–12)

*see elected semesters*

**CPP 598 Special Topics.** (1–4)

*see elected semesters*

**CPP 690 Reading and Conference.** (1 12)

*see elected semesters*

**CPP 691 Seminar.** (1 12)

*see elected semesters*

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog, see Omnibus Course page 56

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## American Indian Studies Program

[www.asu.edu/cpp/americanindian](http://www.asu.edu/cpp/americanindian)

480 965-3634

AG 372

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Carol C. Lujan, Director

**Associate Professor:** Lujan

**Assistant Professors:** Carpio, Miller

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The American Indian Studies Program 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 pertaining to American Indian cultures, history, law, literature, language, art, and government.

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 economic development, or 2) arts, languages and cultures. Contact the program office for a current listing of elective 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.

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" 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 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.

For more information, call the director of the American Indian Studies Program at 480/965-6977.

**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*



Michael Begaye (left), senior program coordinator with the Native American Achievement Program, assists Darin Deschiney.

Tim Trumble photo

**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*

**AIS 494 Special Topics. (1-4)**

*fall and spring*

**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 56.

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 83.

**Asian Pacific American Studies Program**

www.asu.edu/copp/asianamerican  
480 965-9711  
AG 352

**Thomas K. Nakayama, Director**

**Professor:** Nakayama

**Assistant Professors:** de Jesus, L. Rosa

**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 HU SB C	3
APA 360 Asian Pacific American Experience HU SB C	3
APA 450 Asian Pacific American Contemporary Issues SB C	3
APA 484 Internship 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.

**ASIAN PACIFIC AMERICAN STUDIES (APA)**

**APA 194 Special Topics. (1-4)**  
*fa and spring*

**APA 200 Introduction to Asian Pacific American Studies. (3)**

*fa 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)**

*fa and spring*  
Covers diversity of experiences and relations among racial and ethnic groups in the United States. Lecture/discussion. Co-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)**

*fa and spring*  
Open to all students. May be repeated for credit.

**APA 310 Asian Pacific American Arts and Cultures. (3)**

*fa and spring*  
Expresses 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)**

*fa*  
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, and queer theory. Lecture/discussion.  
*General Studies: SB, C*

**APA 340 Asian Pacific Americans and Media. (3)**

*fa*  
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 360 Asian Pacific American Experience. (3)**

*fa 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  
• Filipino American  
• Japanese American  
• Korean American  
• Pacific Islander  
• South Asian American  
• Southeast Asian American  
*General Studies: H, SB, C*

**APA 394 Special Topics. (1-4)**

*fa 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's issues and identities

**APA 450 Asian Pacific American Contemporary Issues. (3)**

*fa and spring*  
Focuses on issues shaping Asian Pacific American communities, including immigration politics, education, health, family, gender, youth, inter-racial relations, and other contemporary topics. Lecture/discussion. Prerequisite: APA 200 or instructor approval.  
*General Studies: SB, C*

**APA 484 Internship. (1-12)**

*fa and spring*

**APA 494 Special Topics. (1-4)**  
*fa and spring*  
Open to all students. May be repeated for credit. Topics may include the following:  
• Asian Pacific American Communities

- 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 56.

## 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, Jain, Martin, McPhee, Nakayama, Valentine

**Associate Professors:** Buley, Corey, Corman, Davey, Guerrero, Mayer, Trost

**Assistant Professors:** Brookey, Brouwer, Davis, Floyd, Martinez, Messman, Park-Fuller, Tracy, Trethewey

**Instructional Professional:** Olson

**Assistant Instructional Professional:** McDonald

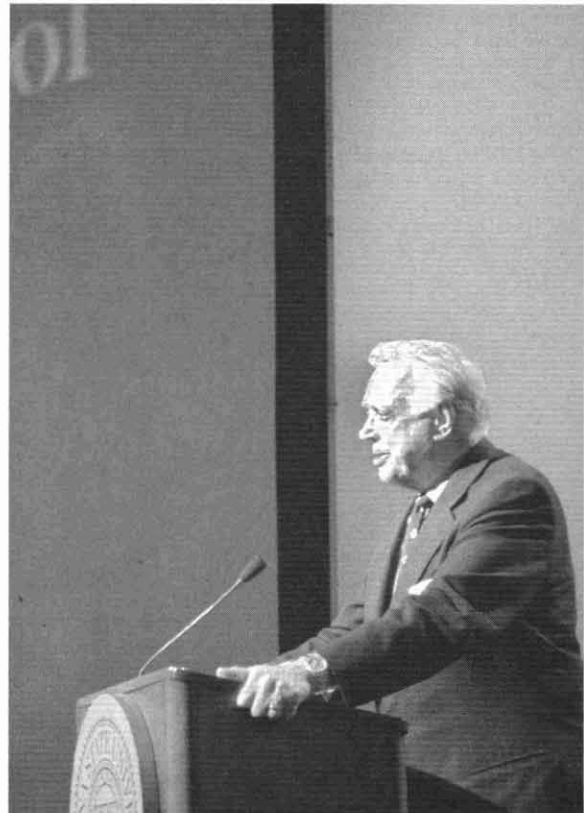
### PURPOSE

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, 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 484); and (2) completion of 12 semester hours of Communication major core course



Hugh Downs addresses an assembly during one of his appearances for the School of Human Communication, which bears his name.

Tim Trumble photo

requirements (COM 100, 207, 225, 308) with a minimum grade of “C” 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.

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 83.

**COLLEGE OF PUBLIC PROGRAMS**

Students must choose three of the following courses for a total of nine semester hours:

- COM 110 Elements of Interpersonal Communication SB ..... 3  
or COM 31 Relational Communication 3
- COM 241 Introduction to Oral Interpretation L HU ..... 3
- COM 251 Introduction to Organizational Communication SB ..... 3
- COM 263 Elements of Intercultural Communication SB, C, G ..... 3
- COM 321 Rhetoric: Theory and Research L HU, H  
or COM 323 Communication Approaches to Popular Culture C ..... 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 SB ..... 3
- COM 414 Rhetoric of Social Issues HU ..... 3
- COM 441 Performance Studies HU ..... 3
- COM 450 Theory and Research in Organizational Communication SB ..... 3
- COM 463 Intercultural Communication on Theory and Research SB, G ..... 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” 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 83 and “University Graduation Requirements,” page 79. 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 in 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 GPA higher than 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” minimum requirement must be met for each class.

**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)**

fa spr g summer  
Topics of interest: Introduction to basic theories, dimensions and concept of human communication: interaction and behavior  
*General Studies SB*

**COM 110 Elements of Interpersonal Communication. (3)**

fa spr ng summer  
Demonstration and practice of communication techniques: negotiation and mediation  
Prerequisite: 2.25 GPA  
*General Studies SB*

**COM 207 Introduction to Communication Inquiry. (3)**

fa spr ng summer  
Base of inquiry into human communication: conducting introduction to notions of theory, philosophy, problems and approaches to the study of communication  
Prerequisites: COM 100 2.50 GPA

**COM 222 Argumentation. (3)**

fa and spr ng  
Philosophical and theological foundation of argumentation: conducting a comparison of modes of advocacy and evidence  
Prerequisite: ENG 101 or 105  
*General Studies L*

**COM 225 Public Speaking. (3)**

fa spr ng summer  
Verbal and nonverbal communication: nonverbal speaking: discussion and practice: nonverbal and physical delivery and nonverbal organizational and development of public communication  
Prerequisite: ENG 101 or 105  
*General Studies*

**COM 230 Small Group Communication. (3)**

fa spr ng 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)**

fa spr ng summer  
Communication: literary materials through the mode of performance: Verbal and nonverbal behavior: interaction: interpretation with literature and audience and rhetorical and dramatic analysis of literary modes  
Prerequisites: ENG 101 or 105 2.25 GPA  
*General Studies H*

## HUGH DOWNS SCHOOL OF HUMAN COMMUNICATION

### COM 250 Introduction to Organizational Communication. (3)

*fa 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 251 Interviewing. (3)

*selected semesters*

Principles and techniques of interviewing, including practice through real and simulated interviews, informational, persuasive, and employee-related situations. Not open to freshmen.

### COM 259 Communication in Business and the Professions. (3)

*fa spring summer*

Intrapersonal, 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)

*fa spring summer*

Basic concepts, principles, and skills for improving communication between persons from different minority racial/ethnic and cultural backgrounds. Lecture/discussion. Cross-listed as AFR 263. Credit allowed for only AFR 263 or COM 263. Prerequisite: 2.25 GPA.

*General Studies SB C G*

### COM 271 Voice Improvement. (3)

*selected semesters*

Intensive personal and group experience to improve normal voice usage, including articulation and pronunciation.

### COM 281 Communication Activities. (1-3)

*fa spring summer*

Nongraded participation in forensics or interpretation cocurricular activities. Maximum 3 semester hours each semester. Prerequisite: instructor approval.

### COM 294 Special Topics. (3)

*fa spring summer*

Topics may include the following:

- Beyond Words

### COM 300 CIS: Communication in Interdisciplinary Studies. (3)

*fa spring summer*

Examines and analyzes communication in the context of other academic disciplines. May be repeated for credit. Open to B.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)

*fa 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 or higher: COM 207, MAT 114, or higher-level MAT course.

*General Studies L*

### COM 310 Relational Communication. (3)

*fa 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)

*fa and spring*

Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiation. Prerequisites: COM 100. Minimum cumulative ASU GPA of 2.50.

### COM 316 Gender and Communication. (3)

*fa and spring*

Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social psychology

and history perspectives. Prerequisite: minimum cumulative ASU GPA of 2.50.

*General Studies SB C*

### COM 317 Nonverbal Communication. (3)

*fa and spring*

Study of communication using space, time, movement, facial expressions, touch, appearance, smell, environment, objects, voice, and gender/cultural variables. Not open to students with credit in COM 294/ST-Beyond Words. Prerequisite: minimum cumulative ASU GPA of 2.50.

### COM 319 Persuasion and Social Influence. (3)

*fa 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*

### COM 320 Communication and Consumerism. (3)

*once a year*

Critical evaluation of messages designed for public consumption. Perspective on 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)

*fa 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 HU H*

### COM 323 Communication Approaches to Popular Culture. (3)

*fa spring summer*

Emphasizes cultural 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)

*fa 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. Prerequisite: COM 225. Minimum cumulative ASU GPA of 2.50.

*General Studies L*

### COM 341 Social Contexts for Performance. (3)

*selected semesters*

Adaptation and performance of theater for the community outside the university. Research into the practical uses of performed theater. 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, folkore, 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)

*fa*

Studies effects of new communication technology on society, organization, 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*

Literacy and critical inquiry. **MA** mathematics. **CS** computer statistics. Quantitative applications. **HU** humanities and fine arts. **SB** social behavior science. **SG** natural science. General core courses. **SQ** natural science—quantitative. **C** cultural diversity in the United States. **G** global history. See "General Studies" page 8.

## COLLEGE OF PUBLIC PROGRAMS

### COM 371 Language, Culture, and Communication. (3)

*fa and spring*

Cultural influence of language on communication including cultural function of language, bilingualism, culturalism and dialectism. Lectures, discussion, Cross-listed as AFR 371. Credit awarded for only AFR 371 or COM 371. Prerequisites: COM 263 or AFR 263. Minimum cumulative ASU GPA of 2.50.

*General Studies SB C G*

### COM 382 Classroom Apprenticeship. (1-3)

*fa spring summer*

Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in either COM courses maximum 3 semester hours each semester. Prerequisite: 2.5 GPA written instructor approval.

### COM 394 Special Topics. (1-4)

*fa spring summer*

Prerequisite: minimum cumulative ASU GPA of 2.5

### COM 400 CIP: Communication in Professions. (3)

*fa spring summer*

Specialized study of communication professions in professional and organizational settings. Open to Business majors only. May be repeated for elective discussion. Prerequisite: both COM 1 and 225 or only COM 259. 2.00 GPA.

*General Studies HU C*

### COM 404 Research Apprenticeship. (3)

*fa and spring*

Direct research experience on faculty projects. Student faculty member based on interests. Elective apprenticeship. Prerequisites: COM 308 or instructor approval. Minimum cumulative ASU GPA of 2.50. Approval required.

### COM 407 Advanced Critical Methods in Communication. (3)

*spring*

Examines critical approaches relevant to communication including textually, socially, theory, cultural studies and ethnography. Lectures, discussion. Prerequisites: COM 308. Minimum cumulative ASU GPA of 2.50.

### COM 408 Quantitative Research Methods in Communication. (3)

*fa and spring*

Advanced designs, measurement techniques and methods of data analysis of communication research. Prerequisites: COM 308 and a course in general statistics: EDP 454 or POS 401 or PSY 230 or QBA 221 or SOC 390 or SP 226. Minimum cumulative ASU GPA of 2.50.

### COM 410 Interpersonal Communication Theory and Research. (3)

*fa spring summer*

Survey and analysis of major research topics, paradigms and theories dealing with message exchanges between and among social peers. Prerequisites: COM 111 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 417 Communication and Aging. (3)

*selected semesters*

Critical study of changes in human communicative patterns through the later adult years with attention on intergenerational relationships and self-concept functions. Prerequisite: minimum cumulative ASU GPA of 2.50.

### COM 421 Rhetoric of Social Issues. (3)

*fa and spring*

Critical rhetorical study of social issues and speeches on social issues of the past and present. Prerequisites: COM 382 or 383. 3.00 GPA.

*General Studies H*

### COM 422 Advanced Argumentation. (3)

*selected semesters*

Advanced study of argumentation theories and research as applied to public adversary scholarly and legal settings. Prerequisites: M 222. Minimum cumulative ASU GPA of 2.5.

### COM 426 Political Communication. (3)

*fa*

The rhetorical form of political communication including campaign, 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 sociological foundations, contemporary research and application to group situations. Prerequisites: COM 230. Minimum cumulative ASU GPA of 2.5.

### COM 441 Performance Studies. (3)

*fa 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 H*

### COM 445 Narrative Performance. (3)

*selected semesters*

Theory and practice of performing narrative texts, e.g. performance, oral histories, dramas, essays, letters, non-descriptive directing and theatrical plays. 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 the performance and critical writing of 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)

*fa spring summer*

Critical evaluation and analysis of the dominant theories of organizational communication and the corresponding research strategies. Prerequisites: COM 251, 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. Prerequisite: COM 250. Minimum cumulative ASU GPA of 2.50.

### COM 463 Intercultural Communication Theory and Research. (3)

*fa spring summer*

Surveys and analyzes major theories and research dealing with communication between people of different cultural backgrounds primarily in international settings. Lecture discussions on small group work. Cross-listed as AFR 463. Credit awarded for only AFR 463 or COM 463. Prerequisites: COM 263 or AFR 263, 308. Minimum cumulative ASU GPA of 2.50.

*General Studies SB G*

### COM 465 Intercultural Communication Workshop. (3)

*selected semesters*

Experiential, activity-based, didactic 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)

*fa spring summer*

Fee. Prerequisites: COM 225, 388. Minimum cumulative ASU GPA of 2.5. Approval required. Prerequisite: COM 411 or 421 or 441 or 450 or 463.

### COM 494 Special Topics. (1-3)

*fa spring summer*

Prerequisite: minimum cumulative ASU GPA of 2.5.

## WALTER CRONKITE SCHOOL OF JOURNALISM AND MASS COMMUNICATION

### COM 501 Research Methods in Communication. (3)

*fa*  
Critical analysis of systems of inquiry in communication focusing on the identification of variables and approaches to conducting research in communication. Prerequisite: instructor approval.

### COM 504 Theories and Models in Communication. (3)

*fa*  
Theory construction, metatheoretical concerns, models, construct definition, and comparative analysis of current theories in communication. Prerequisite: instructor approval.

### COM 508 Quantitative Research Methods in Communication. (3)

*fa*  
Empirical research designs, measurements, and statistical strategies and techniques in analyzing and evaluating experimental and descriptive research in communication. Prerequisites: both COM 501 and 504 or on instructor approval.

### COM 509 Qualitative Research Methods in Communication. (3)

*spring*  
Qualitative research methods including interviewing, field methods, and other nonquantitative techniques for analyzing communication. Prerequisites: both COM 501 and 504 or on instructor approval.

### COM 512 Death, Society, and Human Experience. (3)

*se eced semesters*  
Examined by death, bereavement, and suicide from both individual and sociocultural perspectives in terms of options for communication and action in death-related situations. Prerequisite: instructor approval.

### COM 521 Rhetorical Criticism of Public Discourse. (3)

*se eced semesters*  
History and significance of rhetorical theory and criticism in the analysis of public discourse. Prerequisites: both COM 501 and 504 or on instructor approval.

### COM 584 Communicat on Internship. (1–12)

*fa spring summer*

Fee

### COM 596 Pro-Seminar in Communication. (0)

*fa*  
Discussion of research projects with the faculty. Prerequisite: admission to the graduate program.

### COM 604 Theory Construction in Communication. (3)

*fa*  
Review and analysis of philosophical problems inherent in communicative research and of metatheoretical designs to deal with these problems. Prerequisite: COM 504 or instructor approval.

### COM 607 Contemporary Rhetorical Methods. (3)

*spring*  
Analysis of issues in the practice of rhetorical communication research, including rhetoric and scholarly seminar.

### COM 608 Multivariate Statistical Analysis of Data in Communication. (3)

*spring*  
Statistical analysis of communication research data. Multivariate procedures used in communication research and methods of causal analysis. Prerequisites: COM 501 and 508 or the equivalent.

### COM 609 Advanced Qualitative Research Methods in Communication. (3)

*fa*  
Analysis of issues in the practice of qualitative communication research including data gathering, fieldwork, issues, analysis strategies, and reporting results. Prerequisite: COM 509 or instructor approval.

### COM 680 Practicum: Research in Communication. (3)

*spring*  
Guided practice in the conduct of communication research. Topics identified on procedures, formats, and ethics of publishing. Prerequisite: COM 604.

### COM 691 Seminar. (1–12)

*fa spring summer*

Lecture/discussion. Topics may include the following:  
• Current Organization Approaches to Communication 3  
• Examination of Privacy and Disclosure 3  
• Intercultural Aspects of Communication 3  
• Interpersonal and Relational Communication 3

• Research in Performance Studies 3

• Rhetorical Issues 3

• Social Influence 3

Prerequisite: instructor approval.

### COM 792 Research. (1–12)

*se eced semesters*

### COM 799 Dissertation. (1–15)

*se eced semesters*

**Omnibus Courses.** For an examination of courses offered but not specifically listed in this catalog, see Omnibus Courses, page 56.

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## Walter Cronkite School of Journalism and Mass Communication

[www.asu.edu/cronkite](http://www.asu.edu/cronkite)

480 965-5011

STAUF A231

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**Joe S. Foote, Director**

**Professors:** Craft, Cronkite, Dog Foote, Godfrey, Merrill, Sylvester, Watson, Youm

**Associate Professors:** Aiken, Barrett, Bramlett, Soomon, Gaican, Lentz, Matera, Russell, Russomanno

**Assistant Professors:** Keith, Lutyk, Scock

**Clinical Professors:** Tu, Le, Gh

**Lecturers:** Casavantes, Ncho, s

**Senior Administrative Professional:** Le, Gh

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### 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, and visual journalism.

Literacy and critical inquiry MA mathematics CS computer statistics quantitative applications HU humanities and fine arts SB social and behavioral sciences SG natural sciences—general core courses SQ natural science quantitative CC cultural diversity in the United States G global health care See General Studies, page 83

**COLLEGE OF PUBLIC PROGRAMS**

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.

**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 30 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.

As described above, students must have completed specified lower division courses. Preprofessional status students must complete the following courses.

JMC 201 Journalism Newswriting L	5
MCO 111 Introduction to Mass Communication SB	5
or MCO 112 Media and Society SB 3	
<b>Total</b>	<b>6</b>

To be considered for admission to the school's upper division professional program, students must obtain an application form from the school office in STAF A231. 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.

**ADVISING**

Students should follow the sequence of courses outlined in school curriculum check sheets and the advice of the school's academic advisors. All students who enroll as preprofessionals or who seek and ultimately gain professional status should meet regularly with Walter Cronkite School of Journalism and Mass Communication academic advisors. Conscientious, careful planning and early advising are crucial to students who desire 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 50 semester hours in courses outside the majors of Broadcast Journalism, 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" or higher in all courses taken in the major and in the required related area.

**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" 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.

## WALTER CRONKITE SCHOOL OF JOURNALISM AND MASS COMMUNICATION

Required core courses (12 of the 30 to 36 hours are required of all students in all five concentrations):

JMC 211 Journalism Newswriting L	3
MCO 111 Introduction to Mass Communication SB	3
MCO 302 Media Research Methods	3
MCO 402 Mass Communication Law L	3
<b>Total</b>	<b>12</b>

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.

These courses are in addition to other degree requirements. See "University Graduation Requirements," page 79.

**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 83, and the College of Public Programs course requirements found under "College Degree Requirements," page 486. 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.

MCO 418 History of Mass Communication SB H	3
MCO 431 International Mass Communication G	3
MCO 450 Visual Communication HU	3
MCO 456 Political Communication SB	3
MCO 461 Race, Gender, and Media C	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 "C" grade in each course in the minor, and must have a major other than Journalism and Mass Communication.

### 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)

*fa 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, major

##### JMC 201 Journalism Newswriting. (3)

*fa and spring*

Writing news for the print media. Prerequisites: ENG 101 or 105, MCO 110 or 120, successful completion of English proficiency exam, major

*General Studies L*

##### JMC 202 Radio-Television Writing. (3)

*fa spring summer*

Writing for electronic media news and continuity. Prerequisites: MCO 110 or 120, successful completion of English proficiency exam, major

*General Studies L*

##### JMC 235 Production Techniques. (3)

*fa spring, summer*

Introduces basic concepts of audio and video production, introduces operation of portable cameras, recorders, microphones, lights, editing, and postproduction equipment. Prerequisites: JMC 200, successful completion of English proficiency exam, major.

##### JMC 270 Public Relations Techniques. (3)

*fa and spring*

Theory and practice of publicity, public relations, and related techniques and procedures. Prerequisite: MCO 110 or 120

##### JMC 300 Advanced Broadcast News Writing. (3)

*fa and spring*

Technique and practice in news writing for broadcast and cable applications. Prerequisites: JMC 201, professional status

##### JMC 301 Reporting. (3)

*fa and spring*

Fundamentals of news gathering, interviewing, and in-depth reporting. Prerequisites: JMC 201, professional status

*General Studies L*

##### JMC 313 Introduction to Editing. (3)

*fa and spring*

Copyediting and headline writing. Electronic editing on personal computer terminals. Prerequisites: JMC 301, professional status

##### JMC 315 Broadcast News Reporting. (3)

*fa and spring*

News and information practices of networks, stations, and industry. Practice in writing, reporting, and editing with emphasis on audio. Prerequisites: JMC 201, professional status

*General Studies L*

##### JMC 330 Advanced Broadcast Reporting. (3)

*fa 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, professional status

L literature and critical inquiry MA mathematics CS computer statistics quantitative applications HU humanities and fine arts SB social and behavioral sciences SG natural science general education SQ natural science quantitative culture diversity in the United States G global history. See General Studies page 83.

## COLLEGE OF PUBLIC PROGRAMS

### JMC 332 Broadcast Programming. (3)

*fa spr ng summer*

Programing theory and evaluation regu ation eth cs and respons b tes and bas cs of audience psychograph cs and effects. Prerequ s tes JMC 200 profes ona tatus

### JMC 351 Photojournalism I. (3)

*fa and spr ng*

Tak ng deve op ng and pr nt ng p ctures for newspaper and magaz ne pr duction on a med a dead ne bas s Students shou d have the r own cameras Prerequ s tes MC 201 profes ona status

### JMC 401 Advanced Public Relations. (3)

*fa and spr ng*

Advanced theory and pract ce of pub cty pub cre atons and re ated techn ques and procedures Prerequ s te JMC 270

### JMC 412 Editorial Interpretation. (3)

*se ected semesters*

The press as an nfluence on pub cop n on Ro e of the ed tor a n ana yz ng and nte pret ng current events Prerequ s tes JMC 301 profes ona status.

### JMC 413 Advanced Editing. (3)

*fa and spr ng*

Theory and pract ce of newspaper ed t ng ayout and des gn p cture and story se e ton Prerequ s tes JMC 313 profes ona status

### JMC 414 Electronic Publication Design. (3)

*fa and spr ng*

Theory, organ zat on and pract ce of ayout typography and des gn n trad tona and mu tmed a publ shng Prereq s tes JMC 401, profes ona status

### JMC 415 Writing for Public Relations. (3)

*fa and spr ng*

Deve opment of spec f c wr t g techn ques for the pract oner n pub cre atons agenc es and d v o s of major organ zat ons Prerequ s tes JMC 401 profes ona status

### JMC 417 Public Relations Campaigns. (3)

*fa and spr ng*

Theory pr nc pes and terature of pub cre atons and how they re ate to audiences camp gns, and eth s Prerequ s tes JMC 40 profes ona status Corequ s te JMC 415

### JMC 420 Reporting Public Affairs. (3)

*fa and spr ng*

nstruct on and ass gnments report ng the courts, schoo s govern ment cty ha , soc a prob ems and other areas nvo v ng pub c ssues Prerequ s tes JMC 301 profes ona status

### JMC 433 Broadcast Sales and Promotion. (3)

*fa and spr ng*

Bas cs of e ectron c med a market ng pract ces n ud ng ommerc a tme sa es techn ques and rad o/TV promot on fundamenta s Prerequ s tes JMC 200 profes ona status

### JMC 437 Advanced TV Production. (3)

*fa and spr ng*

Emphas zes nd v dua product on projects of the student s own cept on and des gn ut z ng stud o fed and postproduct on tech n ques Prerequ s tes JMC 235 profes ona status

### JMC 440 Magazine Writing. (3)

*fa and spr ng*

Wr t ng and market ng magaz ne art c es for pub cat on Prerequ s tes JMC 301, profes ona status

### JMC 451 Photojournalism II. (3)

*fa and spr ng*

Theory and pract ce of photo urnal sm w th emphas s on shoot ng ght ng and ayout for the med a Prereq s tes JMC 351, profes ona status

### JMC 452 Photojournalism III. (3)

*fa and spr ng*

Advanced theory and pract ce of photo urnal sm w th emphas s on the photo essay and ustrat ons n ba k and wh te and co or 2 hours ecture 2 hours ab Prerequ s tes JMC 451 profes ona status

### JMC 465 Precision Journalism. (3)

*fa and spr ng*

Advanced wr t ng course w th focus on reporting po s and surveys and other numer ca y based tor es as we as on understand ng the concepts that under e po s and surveys Lecture ab Prereq s tes JMC 301 profes ona status

### JMC 470 Depth Reporting. (3)

*fa and spr ng*

ntroduces strateg e for wr t ng n depth newspaper or magaz ne art c es Lecture ab Prerequ s tes JMC 301 profes ona status, nstr ctor approva

### JMC 472 Broadcast Station Management. (3)

*fa spr ng summer*

Management pr c pes and pract ces. c ud ng organ zat on pro e dure po ces person e prob ems and financ a spe ts of stat on management Prerequ s tes JMC 332 profes ona tatus

### JMC 475 Television Newscast Production. (3)

*fa and spr ng*

Wr t ng, report ng and product on of the te ev s on newscast Cap stone course of the br ad ast jour a sm emphas s Prerequ s tes profes ona status nstructor approva

**Omnibus Courses.** Fo an exp anat on of courses ffered but not spe fca y sted n th s cata og see Omn bu Courses page 56

## MASS COMMUNICATION (MCO)

### MCO 110 Introduction to Mass Communication. (3)

*fa and spr ng*

Organ zat on funct on and re p ns b tes of the med a and adju ct serv es Pr mary emphas s on newspapers, rad o te ev s n and magaz nes Cred t s a owed for on y MCO 110 or 120 Prerequ s te ENG 101 or 105 or 107

*Genera Stud es SB*

### MCO 120 Media and Society. (3)

*fa spr ng summer*

Ro e of newspapers magaz nes, rad o, te ev s on and mot on p ctures n Amer an soc ety Cred t a owed for on y MCO 120 or 110 Des gned for nonmajors.

*Gene a Stud es SB*

### MCO 302 Media Research Methods. (3)

*fa and spr ng*

Surveys research meth ds used n the soc a sciences w th a focus on mass commun cat on Prerequ s te profes ona stat s

### MCO 402 Mass Communication Law. (3)

*fa spr ng summer*

Leg a aspects of the r ghts pr v eges and ob gat ons of the pre ad o, and te ev s on Prerequ s tes 87 hours profes ona tatu

*Genera Stud es L*

### MCO 418 History of Mass Communication. (3)

*fa and spr ng*

Amer can journa sm from ts Eng sh and co on a or g s to the pre ent day Deve opment and nfluence of newspapers magaz nes rad o te ev s on and news gather ng agenc es

*Ge era Stud es SB H*

### MCO 421 News Problems. (3)

*fa and spr ng*

Te ds and prob em of the ews med a emphas z ng ed tor a dec s ns n the process g of news

### MCO 430 International Mass Communication. (3)

*fa and spr ng*

Comparat ve st dy of c mmun cat o and med a systems nformat n gather ng and dssem nat on under d fferent po t a and cu tura sy tems

*Genera Stud es G*

### MCO 435 Emerging Media Technologies. (3)

*fa and spr ng*

Surveys new te ommun cat on technog es n a convergent env ro ment

### MCO 450 Visual Communication. (3)

*fa , spr ng summer*

Theory and trad ton of commun at on through the v sua med a w th emphas s o the ont nu ty of trad to s common to modern v sua med a

*Genera Stud es 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 pre-biographic examination of the interface between AHANA Americans and the mass media in the United States. Lecture/discussion. Cross-listed as AFR 460. Credit awarded for only AFR 460 or MCO 460.

*General Studies C***MCO 470 Issues Management and Media Strategy. (3)***fall*

Strategic aspects of media planning and management in public relations, public affairs/crisis communication, big media ethics, and government relations. Seminar. Prerequisite: MC 411 or instructor approval.

**MCO 494 Special Topics. (3)***selected semesters***MCO 501 Newswriting and Reporting. (3)***fall*

Designed for graduate students in the M.M.C. program who have undergraduate degrees in non-communication areas. Objective: to teach fundamental writing and reporting. Lecture/lab. Prerequisite: acceptance into M.M.C. graduate program or instructor approval.

**MCO 503 Press Freedom Theory. (3)***spring*

Examines philosophical and legal aspects of press freedom. Emphasizes First Amendment theory evolution from 1791 to present.

**MCO 510 Research Methodology in Mass Communication. (3)***fall and spring*

Identifies research problems in mass communication. Overview of questionnaire construction, attention survey, historical content analysis, experimental, and legal research methods. Prerequisite: acceptance into M.M.C. graduate program or instructor approval.

**MCO 520 Mass Communication Theories and Process. (3)***fall*

Analyzes various theoretical models of mass communication with emphasis on the applications of these theories to various professional communication needs.

**MCO 522 Mass Media and Society. (3)***spring*

Mass media as social institutions, particularly interaction with government and public. Emphasizes criticism and normative statements.

**MCO 530 Media Ethics. (3)***fall*

Ethical conventions and practices of print and electronic media as they relate to the government and private sectors of the society.

**MCO 531 Broadcast Journalism. (3)***spring*

News and information practices of networks, stations, and industry. Practice in writing, reporting, and editing with emphasis on video. Lecture/lab. Prerequisite: MCO 501.

**MCO 540 Historical/Legal Methods. (3)***spring*

Introduces legal and historical methods necessary to conduct qualitative mass communication research. Prerequisite: M.M.C. graduate student.

**MCO 560 Arizona Media Law. (3)***fall*

Case study approach of first amendment issues, media access, confidentiality, and invasion of privacy as applied to media organizations in Arizona. Lecture/seminar.

**MCO 593 Applied Project. (1-12)***selected semesters*

**Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog, see Omnibus Courses page 56.

**School of Justice Studies**

www.asu.edu/copp/justice

480 965-7682

WILSON 331

**Doris Marie Provine, Director****Regents' Professor:** Atheide

**Professors:** Cavender, Figueira-McDonough, Haynes, Hepburn, Johnson, Jurk, Lauderdale, Musheno, Provine, Romero, Schneider, Zatz.

**Associate Professors:** Bortner, Lujan, Menjivar, Ridding, In

**Assistant Professors:** Adelman, Affitto, Hanson, Lopez, Mun

**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. 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 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

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 education SQ natural science quantitative Cultural diversity in the United States Global history. See General Studies page 83.

**COLLEGE OF PUBLIC PROGRAMS**

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 484), and (2) completing a 1 of the following classes with a 2.50 minimum average GPA and a minimum grade of "C" in each:

- Choose between the curriculum combinations below:
  - ENG 101 First Year Composition 3
  - ENG 102 First Year Composition 3
  - ENG 105 Advanced First Year Composition 3
  - ENG 107 English for Foreign Students 3
  - ENG 105 English for Foreign Students 3
- JUS 105 Introduction to Justice Studies 3  
or JUS 105 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 480-965-7652.

**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.

**JUSTICE STUDIES MINOR**

The minor 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.

Fifteen 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, six hours of which must be upper division credit. Students must receive a minimum grade of "C" for all courses in the minor and meet all course eligibility requirements, including prerequisites. Consult the minor verification form available in the school office.

**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" or higher in all justice studies courses taken at ASU that apply to the justice studies component of the curriculum (i.e., non-electives); and
5. meet the university's residency and scholarship requirements.

**GENERAL STUDIES REQUIREMENTS**

To assure the breadth and depth of their educational 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 83. Note that all three General Studies awareness areas are required. Consult your advisor 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 51 semester hours, of which 15 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 105 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
<b>Total</b>	<b>12</b>

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 an M.S. degree in Justice Studies, which can be earned with a concurrent M.A. degree in Anthropology. The faculty in the School of Justice Studies are also the primary contributors to the interdisciplinary Ph.D. degree in Justice Studies. For more information see the *Graduate Catalog*.

**JUSTICE STUDIES (JUS)**

**JUS Note 1.** For Justice Studies student to take a non required 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 or status 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 or status and a minimum cumulative GPA of 2.50.

**JUS 100 The Justice System. (3)**

*fall, spring, summer*  
Overview of the justice system. Roles of law enforcement personnel, the court, and correctional agencies. Philosophical and theoretical views on 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 awarded for only JUS 105 or 305 or AFR 305. Appropriate for freshmen and sophomores. Lecture, discussion. Cross-listed as AFR 105. Credit is awarded for only AFR 105 or JUS 105.

**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, theft, 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 egoism and criminal justice. See JUS Note 1.

**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 awarded for only JUS 305 or 105 or AFR 105. Appropriate for juniors and seniors. Lecture, discussion. Cross-listed as AFR 305. Credit is awarded for only AFR 305 or JUS 305. See JUS Note 1.

**JUS 306 Police and Society. (3)**

*once a year*  
Focuses on community policing; critical inquiry of administrative decisions on 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 analyses. 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 social 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 deo logia and political forces producing an increasingly unequal society. Lecture, discussion. Cross-listed as AFR 321. Credit is awarded for only AFR 321 or JUS 321. 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 legal activities, theories of containment, and efforts by justice agencies to counter its dominance in society. Lecture, discussion. See JUS Note 1.

Literacy and critical inquiry. MA mathematics. CS computer statistics quantitative application. HU humanities and fine arts. SB social and behavioral science. SG natural and general core courses. SQ natural science quantitative. Cultural diversity in the United States. Global history. See General Studies page 8.

## COLLEGE OF PUBLIC PROGRAMS

### JUS 345 White Collar Crime. (3)

*once a year*

Basic white collar concepts and categories causes and effects mechanism and contexts of operation social and criminological response Lecture discussion See JUS Note 1

### JUS 350 Immigration and Justice. (3)

*fall spring summer*

Examines immigration policy history of migration refugees issues about 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*

Role of law as a social control agent of social control Nature sanctions and morality of law Categories of law and choice 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 legal analysis primary appellate judicial opinions substantive criminal law state court determination Lecture discussion See JUS Note

### JUS 368 Procedural Criminal Law. (3)

*once a year*

Due process with respect to individual liberty privacy and government power emphasis on broad concepts of justice 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 justice 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 of 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 the 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*

First a year exam 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 relationship between state and economic force including processes of regulation state administration apparatuses Lecture case analysis cooperative learning discussion See JUS Note

*General Studies L*

### JUS 450 Alternatives to Incarceration. (3)

*once a year*

Investigates various alternatives to incarceration advantages disadvantages or 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 patriarchal theories Examines issues of racism, sexuality and the law Lecture discussion See JUS Note 2

### JUS 463 Discretionary Justice. (3)

*once a year*

Use of 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 include AIDS burlesque 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 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 student 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. See JUS Note 2. Prerequisite: 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. Prerequisite: 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*

Organized 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, applicable to the major. Readings, conferences, tutorials. Prerequisite: major status. Minimum cumulative GPA of 2.75; minimum GPA in JUS courses of 3.00. Instructor approval.

**JUS 500 Justice Research Methods. (3)**

*once a year*

Theories and methods of research with emphasis on development of designs most relevant to justice data and problems.

**JUS 501 Justice Theory. (3)**

*once a year*

Theories and philosophies of social, economic, political and criminal justice. Applications of theories to contemporary justice issues. Lecture, discussion.

**JUS 503 Crime and Social Causation. (3)**

*once a year*

Theories of deviance and crime as they relate to social policies and specific response of the justice complex.

**JUS 509 Statistical Problems in Justice Research. (3)**

*once a year*

Methodological problems of research design and statistical methods specific to justice studies.

**JUS 515 Comparative Justice. (3)**

*once a year*

Focuses on justice, equity and human rights cross-culturally examining both theoretical and methodological issues. Seminar.

**JUS 521 Qualitative Data Analysis and Evaluation. (3)**

*once a year*

Analyzes qualitative data, e.g. field notes, depth interview transcripts, document analysis, coding and reevaluation with a microcomputer. Qualitative evaluation.

**JUS 542 American Indian Justice. (3)**

*once a year*

Provides a broad overview of American Indian and Alaskan Native issues of justice and justice in contemporary society.

**JUS 555 Migration and Justice. (3)**

*selected semesters*

Explores the causes and consequences of migration to the United States and the incorporation of immigrants into the American economy and society. Seminar.

**JUS 560 Women, Law, and Social Control. (3)**

*once a year*

Gender issues in the exercise of formal and informal mechanisms of social control including economic, social, legal factors both violent and nonviolent.

**JUS 570 Juvenile Delinquency. (3)**

*once a year*

Study of delinquency, including causation theories. A theoretical definition of delinquency, official statistics and the critique and analysis of the interaction between social institutions and youth.

**JUS 575 Race, Gender, and Crime. (3)**

*fall and spring*

Current theoretical and methodological debates and controversies regarding race, ethnicity, gender, assault, crime, and the criminal justice system. Comparative seminar.

**JUS 579 Political Deviance. (3)**

*once a year*

Seminar examines the politics of deviance by integrating the study of conflict with aspects of social organization, especially state formation.

**JUS 584 Internship. (3 or 6)**

*fall, spring, summer*

Assignments in a justice agency designed to further the integration of theory and practice. Placements are arranged through consultation with students and agencies.

**JUS 588 Justice and the Mass Media. (3)**

*once a year*

Analyzes the nature and impact of mass media messages about justice concerns for social order. Lecture, discussion.

**JUS 591 Seminar. (1-3)**

*once a year*

Topics chosen from various fields of justice studies. May be repeated for credit.

**JUS 593 Applied Project. (1-12)**

*selected semesters*

**JUS 610 Law and the Social Sciences. (3)**

*once a year*

Analyzes the theoretical grounds underlying diverse studies of law and society, creation and administration of law and jurisprudence and politics.

**JUS 620 Justice Research and Methods. (3)**

*once a year*

Concept development, research design, data collection strategies, legal research, and building computer databases relevant to the study of justice.

**JUS 630 Data Analysis for Justice Research. (3)**

*once a year*

Variable and multivariate techniques of data analysis and hypothesis testing for justice related research and use of information and statistical programs.

**JUS 640 Theoretical Perspectives on Justice. (3)**

*once a year*

Analyzes philosophical perspectives of justice linkages between social science theory and justice constructs, application of justice to social issues.

**JUS 650 Advanced Qualitative Data Analysis. (3)**

*spring*

Advanced qualitative data collection and analysis techniques including ethnography, in-depth interviews, field notes, coding, transcribing, content analysis, textual analysis. Seminar.

Literacy and literacy inquiry MA mathematical CS computer statistics quantitative application HU humanities and fine arts SB social and behavioral sciences SG natural science—general courses SQ natural science—quantitative Cultural diversity in the United States Global health care see "General Studies page 83"

**COLLEGE OF PUBLIC PROGRAMS**

**JUS 669 Political Trials and Indigenous Justice. (3)**  
*once a year*  
 Focuses upon research on political trials, deviance, and concepts of indigenous and contemporary justice. Lecture/discussion.

**JUS 691 Seminar. (1-3)**  
*fall, spring, summer*  
 Topics chosen from various fields of justice studies. May be repeated for credit.

**Omnibus Courses** For an experiential of courses offered but not specified in the catalog. See Omnibus Courses page 56.

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**School of Public Affairs**

spa.asu.edu  
 480 965-3926  
 WILSN 208

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**Jeffrey Chapman, Director**

**Professors:** Aozee, Cayer, Chapman, Coor, J. Denhardt, R. Denhardt, Hank, Mankin, Musheno, Perry

**Associate Professors:** Brown, Campbe, DeGraw, Lan

**Assistant Professors:** DeLorenzo, McCabe, Peck

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The faculty in the School of Public Affairs offer in under graduate public administration on concentration of 18 semester hours of course work within the Bachelor of Interdisciplinary Studies program. The school also 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 nonprofit 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 be obtained by visiting the School of Public Affairs Student Services Office in WILSN 225A, or by calling 480 965 1037.

**Public Administration and Public Management Certificate**

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
<b>Total</b>	<b>15</b>

The school also offers a 42 semester hour professional Master of Public Administration degree and the Doctor of Philosophy degree. The MPA degree is accredited by the National Assoc at on 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 public policy process and policy analysis.

**PAF 401 Statistics (3)**  
*fall and spring*  
 Survey statistical concepts and techniques with application to public administration. Does not count toward program of study. Satisfies statistical 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, democratic government, citizen participation, power structures, and professional code of conduct.

**PAF 501 Public Service Research I (3)**  
*fall and spring*  
 Philosophy, scope, and methods, public service research design, values, and ethics. Prerequisite: an approved course in statistics.

**PAF 502 Public Service Research II. (3)**  
*fall and spring*  
 Quantitative techniques including multivariate analysis, data analysis, decision making, and computer applications in public affairs. Prerequisite: PAF 501.

**PAF 503 Public Affairs. (3)**  
*fall and spring*  
 Development and context of American public administration and policy, role of administration in governance, and values and ethics in administration.

**PAF 504 Public Affairs Economics (3)**  
*fall and spring*  
 Basics of public sector economic microeconomics and macroeconomics, concepts applied to public sector decisions and policies.

**PAF 505 Public Policy Analysis. (3)**  
*fall and spring*  
 Institutional and formal analysis of policy processes, decision making, and problem solving, values, ethics, and the uses of policy analysis. Prerequisites: PAF 504, satisfaction of the statistics requirement.

**PAF 506 Public Budgeting and Finance. (3)**  
*fall and spring*  
 Legal, social, economic, political, institutional, and ethical foundations of governmental finance, budgets, and budgeting. Prerequisites: PAF 502, 504.

**PAF 507 Public Human Resource Management. (3)**  
*fall and spring*  
 Personnel systems, behavior, and management of personnel in public organizations, collective behavior, unionism, conflict management, motivation, productivity, and ethics.

**PAF 508 Organization Behavior. (3)**  
*fall and spring*  
 Theory and application in the management of organizational behavior with emphasis on leadership and the public service.

**PAF 509 Public Service. (3)**  
*fall and spring*  
 Capstone application of core course knowledge, skills, and abilities required for public service. Prerequisites: PAF 501, 502, 503, 504, 505, 506, 507, 508.

**PAF 511 Governmental Finance. (3)**  
*selected semesters*  
 Sources of funding, management of funds and debts, and general pattern of expenditures in states, counties, and districts. Prerequisite: PAF 504.

**PAF 520 Public Management. (3)**  
*selected semesters*  
 Management process, government and public agencies with emphasis on the executive leadership within the public sector.

**PAF 521 Organization Theory. (3)**

*selected semesters*

Organization theory and current research emphasis with application to public administration organizations

**PAF 522 Public Labor Relations. (3)**

*selected semesters*

Role of public unionism manager policy toward unionism conflict resolution impact of unionism on budgets personnel policies and public policy

**PAF 523 The City and County Manager. (3)**

*once a year*

Manager's role and relationship in the differing forms of administration systems at the state and community levels

**PAF 526 Public Sector Human Resource Development. (3)**

*selected semesters*

Concepts and techniques of organizational development in the public sector including staffing supervisory training executive development resource planning and employee training

**PAF 529 Organization on Change and Development. (3)**

*selected semesters*

Explores the nature and management of change and development as a tool to achieve organizational goals effecting planned change

**PAF 530 Management of Urban Government. (3)**

*selected semesters*

Administration practices and behavior within the urban political administration environment Functions areas such as citizen participation urban planning urban transportation and the conflict between urban politics and administration efficiency

**PAF 531 Community Conflict Resolution. (3)**

*selected semesters*

Interdisciplinary approach to understanding the dynamics of community conflict Strategic considerations in policy design and advocacy potential reaction to conflict Reevaluation models and research findings generated by both case studies and comparative methods

**PAF 532 Urban Planning Administration. (3)**

*selected semesters*

Historical and present day uses of urban planning and procedures for its implementation. Basic principles and practices

**PAF 533 Urban Growth Administration. (3)**

*selected semesters*

Examines the process of urban growth and change Emphasizes participation roles played by public and private sectors in management

**PAF 535 Urban Housing Policy. (3)**

*selected semesters*

Comprehensive consideration of the revitalization of American cities with major emphasis upon the housing process and related institutional and services

**PAF 536 Urban Policy Making. (3)**

*selected semesters*

Analyzes the opportunities and costs of influencing public policy and the roles of officials and bureaucracies in decision making

**PAF 540 Advanced Policy Analysis. (3)**

*once a year*

Emphasizes the structure of policy problems forecasting policy alternatives optimizing resources and reducing uncertainty in policy making. Prerequisite: PAF 505 or instructor approval

**PAF 541 Program Evaluation. (3)**

*selected semesters*

Various methodological evaluation of public policies and programs Prerequisite: PAF 511 or instructor approval

**PAF 546 Environmental Policy and Management. (3)**

*selected semesters*

Analyzes environmental policy and planning issues and principles related to the analysis and management of natural and urban regional resources.

**PAF 547 Science, Technology, and Public Affairs. (3)**

*selected semesters*

Influence of science and technology on governmental policy making scientists as administrators and advisors governmental policy making for science and technology government as a sponsor of research and development

**PAF 548 Women, Politics, and Public Policy (3)**

*selected semesters*

Explores how political philosophy politics and public policy are affected by women

**PAF 549 Diversity Issues and Public Policy. (3)**

*selected semesters*

Examines public policy issues concerning affecting women black Latino American and American Indian communities as well as those group impact on the policy process

**PAF 550 Information Management. (3)**

*selected semesters*

Concepts and theory of information and information technology in public sector organization

**PAF 551 Computers in Administration. (3)**

*selected semesters*

Experience in use of computer technology for public administration problem solving

**PAF 552 Public Information Systems. (3)**

*selected semesters*

Systems analysis concepts and theory as applied to administration An alternative mode of information organization and the impact on public decision making

**PAF 556 Database Management Systems. (3)**

*selected semesters*

Concept and use of modern database management systems in administration Advantages and disadvantages of this approach

**PAF 561 Comparative Administration. (3)**

*selected semesters*

Literature in comparative public administration theory Bureaucracy and their impact on the political development process Selected nations

**PAF 562 Intergovernmental Relations. (3)**

*once a year*

Evolution growth present status and characteristics of the US federal system of government Federal state relations state local relations regional national council of government interstate cooperation grants and revenue sharing

**PAF 563 Report Preparation. (3)**

*selected semesters*

Intensive practice in written and oral presentation of reports to conferences with problems in public administration Virginia and technical

**PAF 564 Political Economy. (3)**

*once a year*

Classical and contemporary literature and historical development of governmental and economic arrangements with special emphasis on the role of the state

**PAF 591 Seminar. (1-12)**

*fall and spring*

Topics may include the following

- Business and Government
- Emergency Management
- General Public Administration
- Geographic Information Systems
- Information Management
- Law and Public Administration
- Public Finance Administration
- Public Management
- Public Policy Analysis
- Transportation Systems Seminar
- Urban Affairs and Urban Planning

**PAF 600 Research Design and Methods. (3)**

*once a year*

Advanced methods of research design and data collection Prerequisites: former graduate level course work in statistics and research methods

Letter and critical inquiry MA mathematics CS computer statistics quantitative application HU humanities and literature SB social and behavioral sciences SG natural and earth sciences SQ natural science—quantitative Cultural diversity the United States G global history A Social Science General Studies page 83

## COLLEGE OF PUBLIC PROGRAMS

### PAF 601 Seminar: Policy Analysis and Evaluation. (3)

*once a year*

Normative and conceptual issues of policy formulation, implementation, and evaluation; methods of policy analysis and evaluation.

### PAF 602 Seminar: Foundations of Public Administration. (3)

*once a year*

Ethical, social, legal, and philosophical foundations of public administration.

### PAF 603 Seminar: Organization and Behavior in the Public Sector. (3)

*once a year*

Structure, organization, conduct, and performance of public sector institutions in the administrative field. Prerequisite: PAF 602.

**Omnibus Courses.** For a explanation of courses offered but not specified in this catalog, see Omnibus Course page 56.

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## Department of Recreation Management and Tourism

[www.asu.edu/copp/recreation](http://www.asu.edu/copp/recreation)

480 965-7291

MOEUR 134

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Randy J. Virden, Chair

**Professors:** Aason, Haey, Yoshoka

**Associate Professors:** Ashcraft, Sonmez, Teye, Virden

**Assistant Professors:** Brown, Lecerc, Prichard, Tmothy

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### 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 and recreational 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.

**Recreation Management.** Students pursuing the recreation management concentration can further specialize in therapeutic recreation, community and urban recreation, outdoor recreation, or nonprofit youth agency administration. American Humanities. In addition to the 33 semester hours of major core classes, these concentrations consist of 15 semester hours of recreation-related courses and 15 semester hours of related areas courses.

*Therapeutic Recreation.* With 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 200,000+ field in Arizona.

**Tourism.** The tourism concentration consists of 33 semester hours of major core courses, nine semester hours of tourism-related requirements, nine semester hours of tourism options, and 12 semester hours of non-tourism related course work.

Tourism students may choose to follow either the market and community development track or the services track for their related course work. Information on these tracks is available from the academic advisor.

### DEPARTMENTAL MAJOR REQUIREMENTS

Students may declare Recreation as their major but can not register for upper division core classes with out *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 484).
2. complete REC 120 and 210 with a grade of "C" or higher.
3. complete either COM 225, 241, or 259; and
4. have a "C" or higher in ECN 117, if pursuing the tourism concentration.

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 63 semester hour B.S. degree in Recreation includes 33 semester hours of major core courses, which must be taken on the ASU Main Campus.

## DEPARTMENT OF RECREATION MANAGEMENT AND TOURISM

### Recreation Major Core Courses

REC 120 Leisure and the Quality of Life <i>SB</i>	3
REC 210 Leisure Delivery Systems	3
REC 330 Administration of Recreation Services <i>L</i>	3
REC 350 Promotion and Marketing of Recreation Services	3
REC 364 Foundations of Therapeutic Recreation	3
REC 462 Management of Recreation Services	3
REC 463 Senior Internship	12
REC 482 Assessment and Evaluation of Recreation Services	3
<b>Total</b>	<b>33</b>

REC 330, 350, 462, and 482 require *prerequisite 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" or higher in all courses within the major, including the related area. Specific courses that may be used to fulfill the related requirements are listed on check sheets available in the department office.

In both the recreation management and tourism concentrations, the related areas and directed electives course work must be selected from a departmental list of approved university courses.

### MINORS

The department offers minors in Recreation Management and in 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 and 12 additional semester hours of upper division approved courses from ASU Main.

### CERTIFICATE PROGRAM

**Nonprofit Youth Agency Administration: 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, 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 Agencies	3
REC 3 Fund Raising	3
REC 3 Volunteerism	3
REC 32 Youth and Human Service Workshop	4
REC 42 American Humanics Institute	2
REC 43 Managing Nonprofit Agencies	3
REC 463 Senior Internship	12
<b>Minimum total</b>	<b>31</b>

REC 320 is taken for four semesters, for one semester hour each term.

### 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 outdoor recreation, recreation administration, social psychological aspects of leisure, and tourism and commercial recreation. Students 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. Sociological, 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 philosophical cumulating in an outdoor experience. Field trip.

##### 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 Agencies. (3)

*fall and spring*

Introduces the not for profit youth and human service sector and its role in United States society, the economy and service delivery systems.

##### REC 230 Camp Administration. (3)

*spring*

Historical and philosophical foundations of the organized camp movement in America, trends and issues, camp administration and leadership.

**L**iteracy and critical inquiry **MA** mathematics **CS** computer statistics quantitative application **HU** humanities and fine arts **SB** social and behavioral sciences **SG** natural science general core courses **SQ** natural science—quantitative **C**ultural diversity in the United States **G**lobal history **See** General Studies page 83

## COLLEGE OF PUBLIC PROGRAMS

### **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)**

*once a year*

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)**

*once a year*

Administration of volunteer service programs. Studies and analyzes the volunteer personnel process.

### **REC 315 Community Recreation Systems. (3)**

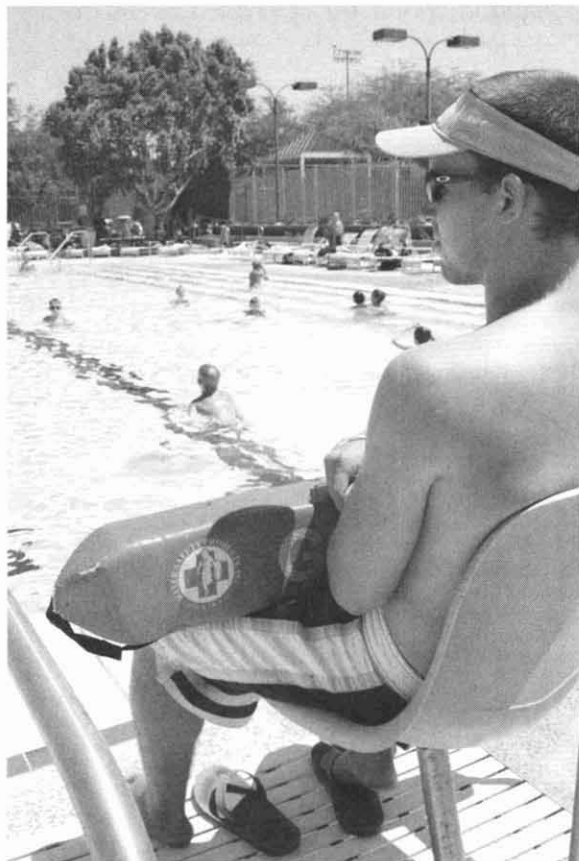
*spring*

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.



Lifeguard Jonathan Ortner keeps watch at the Student Recreation Complex pool.

Tim Trumble photo

### **REC 325 Tourism Accommodations. (3)**

*once a year*

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)**

*once a year*

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)**

*once a year*

Basic aspects and skills in planning meetings and conventions. Industry and market overview of certified meeting planners. Prerequisite: REC 305.

### **REC 350 Promoting and Marketing Recreation Services. (3)**

*fall and spring*

Basic principles of promoting recreation services and strategies focusing on promoting and marketing concepts as they apply to recreation/tourism settings. Prerequisite: Recreation professional status.

### **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 Outdoor Recreation Systems. (3)**

*fall*

Introduces outdoor recreation resource delivery systems; history of wilderness and outdoor recreation resources; the role of outdoor recreation in society; outdoor recreation agencies; related environmental issues. Prerequisite: junior standing or instructor approval.

### **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 390 Adaptive Aquatics. (3)**

*selected semesters*

Focuses on delivery of aquatic programs for the mentally and physically challenged. Lecture, lab.

### **REC 400 Processes and Techniques in Therapeutic Recreation. (3)**

*once a year*

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)**

*fall and 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)**

*once a year*

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 and spring*

National Management Institute for preparation of youth development and nonprofit professionals. Out-of-state conference includes semi-

nars and case studies. May be repeated for credit. Prerequisite: instructor approval.

**REC 430 Managing Nonprofit Agencies. (3)**

*spring*  
Analyzes administrative structure decisions and program delivery within the nonprofit youth and human service agencies. Prerequisite: REC 220; senior standing.

**REC 440 Recreation Areas and Facilities Development and Management. (3)**

*once a year*  
Survey development and management of public, private and commercial recreation areas and facilities with a focus on meeting program needs.

**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)**

*once a year*  
Explores contemporary problems/issues confronting the therapeutic recreation field including philosophical, historical, practice, management, research, and educational issues. Lecture off campus. *Ab* Prerequisites: both REC 364 and 400 or on instructor approval.

**REC 462 Management of Recreation Services. (3)**

*fall and spring*  
Basic principles of administration and their application in successful administrative situations. Analyzes administrative function, structure and policies. Prerequisites: REC 33; Recreation professional status.

**REC 463 Senior Internship. (6 or 12)**

*fall, spring, summer*  
Supervised guided experience in selected agency. *Fee* Prerequisites: REC 462; Recreation major or senior standing.

**REC 470 Environment Interpretation and Education. (3)**

*fall*  
Introduces park interpretation and environmental education that includes theories, principles and techniques.

**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.

**REC 500 Research Methods. (3)**

*once a year*  
Introduces recreation research methods, with emphasis on methodology, questions, research issues and techniques relevant to contemporary social research. Prerequisite: 500 level or higher approved statistics course.

**REC 501 Program Evaluation and Information Management. (3)**

*selected semesters*  
Develop skills in several professional areas including: evaluation, needs assessment, information and data collection, data management/analysis, computer applications and report writing.

**REC 530 Recreation and Tourism Service Management. (3)**

*spring in even years*  
Examines and applies organizational behavior leadership, human resources and development, planning and risk management to professions.

**REC 552 Foundation of the Recreation and Tourism Professions. (3)**

*once a year*  
Examines the philosophical and conceptual foundation of play, leisure, recreation and tourism, history of the profession: professional and research issues.

**REC 555 Social and Psychological Aspects of Recreation and Tourism Behavior. (3)**

*once a year*  
Theoretical review and empirical analysis of social/cultural and psychological foundations of leisure behavior with practical application.

**REC 569 Current Issues in Tourism. (3)**

*once a year*  
General survey of tourism literature with emphasis on relevant theories, concepts and current research.

**REC 570 Social Aspects of Outdoor Recreation Management. (3)**

*once a year*  
Analyzes the social aspects of natural resource recreation management and planning. Prerequisite: REC 370 or its equivalent.

**REC 580 Practicum. (1-12)**

*selected semesters*

**REC 593 Applied Project. (1-12)**

*selected semesters*

**REC 598 Special Topics. (1-12)**

*selected semesters*

**REC 599 Thesis. (1-12)**

*selected semesters*

**Omnibus Courses.** For an examination of courses offered but not specifically listed in this catalog. See Omnibus Courses page 56.

**School of Social Work**

sww.asu.edu

480 965-3304

WHALL 135

**Leslie Leighninger, Director**

**Professors:** Ashford, Coudrogou, Daey, Figueira, McDonough, Kettner, LeCroy, Leighninger, MacEachron, Martinez, Brawley, Moroney, Segal

**Associate Professors:** Brzuzy, Gerdes, Gustavsson, Marsig, Montero, Nchois, Paz, Rsey, Curtiss, Steiner, Warner, Yelow, Bird

**Assistant Professors:** Hoey, Hoeschuh, Hurd, Larson, Napo, Okamoto, Stromwa

**Academic Professionals:** Gonzalez, Santan, Knutson, Woods, Rountree, Antar, Yopez

**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-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

Literacy and critical inquiry MA the arts CS computer statistics quantitative applications HU humanities and fine arts SB social and behavioral sciences SGNTRANCE—general course SQNTRANCE—quantitative CULTRAVRITY the United States Global health care See General Studies page 3

## COLLEGE OF PUBLIC PROGRAMS

planning, administrative, and community practice M.S.W. The focus is on populations of the Southwest and those who are most oppressed and in most 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.)
3. Doctor of Philosophy (Ph.D.) with a major in Social Work.

The M.S.W. program has two areas of concentration in the second year: (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 M.S.W. is also offered at the Flagstaff 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 "Transfer Credit," page 61.

**Applying for Professional Program Status.** Students who have completed 56 semester hours or more and have taken SWU 271 Introduction to Social Work, 291 Social Service Delivery Systems, 295 Foundations of Social Work Practice, 301 Human Behavior in the Social Environment I, and 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 for spring admission or March 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 271, 291, 295, 301, and 310) and a grade of "C" 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 484.

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 70. 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 61. 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 79.

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](http://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 79.

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") or a failing grade ("E" or "F") 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**

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 "Admission," page 484).

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 0.

**Honors B.S.W. Program**

**Criteria for Admission.** For information about admission to the Barrett Honors College, call 480-965-2359. The Barrett Honors College reviews applications on November 1, December 1, and the 15th of every other month. Minimum GPA eligibility ranges from 3.25 to 3.40, depending on the number of semester hours.

Students must be admitted to the B.S.W. program and have a 3.50 GPA in all social work courses they may have taken before admission to the program. To retain honors status, students must maintain a 3.25 GPA in their honors social work classes. However, to graduate from the Barrett Honors College, students must have an overall ASU GPA of 3.40.

**Honors College Requirements.** Students must comply with the Barrett Honors College requirements and take one

Letter of Admittance MA the at CS Computer Statistics  
 Quantitative Methods HU Arts and Fine Arts SB Arts and  
 Behavioral Science SG International Genes SQ Natural  
 Science and Technology the United States Global  
 History and Heritage Studies

## COLLEGE OF PUBLIC PROGRAMS

of the following options:

1. HON 111 and 177 The Human Event (not available to transfer students).
2. HON 371 Freedom and Authority.
3. HON 374 Black and White Atlantic, or
4. HON 394 Special Topics

In addition, students must take SWU 493 Honors Thesis for three to six semester hours. The thesis can be a social work research or creative project preferably related to the student's field placement or area of interest. Students must have a faculty mentor chair to assist with the thesis or creative project.

### Typical Honors Program of Study

Junior Year	
<b>B.S.W. Requirement</b>	
SWG 527 Human Behavior in the Social Environment I	3
Total	3
Senior Year	
<b>Fall Semester</b>	
HON 311 Freedom and Authority <i>LHU</i>	3
or HON 374 Black and White Atlantic <i>HU</i> <i>GS</i>	
or HON 394 Special Topics	
SWG 527 Foundation Practice I	3
SWG 528 Social Policy and Service	3
SWU 411 Field Instruction I	3
SWU 413 Field Instruction Seminar	1
Total	13
<b>Spring Semester</b>	
SWG 511 Foundation Practice II	3
SWG 528 Community and Organizational Change	3
SWU 414 Field Instruction II	3
SWU 415 Integrative Field Seminar	3
SWU 493 Honors Thesis <i>L</i>	3-6
Total	15

If students have already taken HON 71 and 72, HON 394 is not taken.

Students may want to take three semester hours of the thesis in each of the fall and spring semesters.

Note: The preceding graduate SWG courses are taken in lieu of the following undergraduate courses: SWU 341 Human Behavior in the Social Environment II, SWU 411 Social Work Practice II, SWU 413 Social Work Practice III, SWU 432 Social Policy and Services, and SWU 442 Introduction to Practice with Children and Families in Child Welfare or SWU 444 Issues in School Social Work.

**Optional.** Students who have not already taken SWG 32 and 374 when they are admitted may also take the following equivalent graduate courses:

SWG 519 Research Methods in Social Work	3
SWG 523 Diversity and Oppression in Social Work Context	3

### Advanced Standing in M.S.W. Program for Honors

**B.S.W. Graduates.** Students who complete the Honors B.S.W. program are eligible to apply for advanced standing status in the M.S.W. program. If accepted, they could com-

plete the M.S.W. degree in one calendar year (starting in June only). To be eligible for advanced standing status, the student must have graduated from the honors B.S.W. program within the last five years.

## GRADUATE PROGRAMS

The faculty in the School of Social Work offer a Master of Social Work degree and a Ph.D. degree in Social Work. For more information, see the *Graduate Catalog*.

## UNIVERSITY GRADUATION REQUIREMENTS

In addition to fulfilling college and major requirements, students must meet a university graduation requirements. For more information, see "University Graduation Requirements," page 79.

### 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 83.

Note that all three General Studies awareness areas are required. Consult your academic adviser 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" section, page 83, 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 adviser 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:

**Mathematics.** 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 <i>SB</i>	3
PGS 111 Introduction to Psychology <i>SB</i>	3
or SOC 111 Introduction to Sociology <i>SB</i>	3
or SOC 111 Principles of Sociology <i>SB</i>	3

Total

*With a Success* 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 a University requirements (see "University Graduation Requirements," page 79), the College of Public Programs requirements including the General Studies requirements (see "General Studies," page 83), 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**

SWL 271 Introduction to Social Work	SB/H	3
SWU 221 Social Service Delivery Systems		3
SWU 295 Fundamentals of Social Work Practice		3
SWU 301 Human Behavior in the Social Environment I	LSB	3
SWU 302 Social Work Practice I		3
SWU 306 Research Methods in Social Work		3
SWU 304 Human Behavior in the Social Environment II	SB	3
SWU 304 Diversity and Oppression in Social Work Context		3
SWL 411 Social Work Practice II		3
SWU 411 Social Work Practice I		3
SWU 412 Field Instruction I		3
SWU 413 Field Instruction Seminar I		3
SWU 414 Field Instruction II		3
SWL 415 Integrative Field Seminar		3
SWU 437 Social Policy and Services		3
SWL 447 Introduction to Practice with Children and Families in Child Welfare		3
SWU 444 Issues in School Social Work		3
<b>Total</b>		<b>48</b>

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 status 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." If a grade of "D" or "E" 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 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 for Tucson students throughout Southern Arizona. Specially arranged, non-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 with a minimum of 120 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 the student has not returned to good standing or if the student has not met the required semester

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 H stor See Genera Stud e page 83



The Agriculture Building is located on ASU Main campus between the Memorial Union and the Student Services Building.

Tim Trumble photo

GPA. See "Academic Standards and Retention," page 487, 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" 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 that field instructors, faculty, or the faculty advisor identify problems that indicate that a student cannot perform the required functions of a social worker, the program coordinator and faculty advisor may consult and assess the written documentation that has led to such indications.

**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. Appeals involving grades for course work may be submitted to the College of Public Programs Academic and Student Affairs Committee only after discussing the matter with the instructor of the course and the director of the School of Social Work.

**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.

**SOCIAL WORK (GRADUATE PROGRAM) (SWG)**

See the *Graduate Catalog* for the SWG courses.

**SOCIAL WORK (UNDERGRADUATE PROGRAM) (SWU)**

**SWU 271 Introduction to Social Work. (3)**

*fa 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. Prerequisite: PGS 111 or SOC 111. *General Studies SB H*

**SWU 291 Social Service Delivery Systems. (3)**

*fa 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. Prerequisite: SW 271.

**SWU 295 Foundations of Social Work Practice. (3)**

*fa and spring*

Provide theoretical foundation and skill base necessary for social work interventions with individuals, small groups, and larger systems. Prerequisite: SW 271, 291.

**SWU 301 Human Behavior in the Social Environment I. (3)**

*fa 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. Prerequisite: SWU 271, 291, 295. *General Studies L SB*

**SWU 302 Human Biology for Social Workers. (3)**

*fa and spring*

Overview of human anatomy and physiology and their relationship between physical and social environments. Lecture/discussion. Prerequisite: SWU 271, 291.

**SWU 310 Social Work Practice I. (3)**

*fa and spring*

Introduces social work methods, emphasizing the following: skills, professional interview, assessment, referrals, and process and psychological recording. Prerequisite: SW 295. Prerequisite: SWU 301.

**SWU 320 Research Methods in Social Work. (3)**

*fa and spring*

Apples scientific principles to field practice, impact assessment, intervention, procedure, and problem formulation in social work. Lecture/cooperative learning. Prerequisite: SWU 310.

**SWU 321 Statistics for Social Workers. (3)**

*fa 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. Prerequisite: SWU 320. *General Studies CS*

**SWU 340 Human Behavior in the Social Environment II. (3)**

*fa and spring*

Lifelong development from middle childhood to maturity. Lecture/discussion. Prerequisite: SWU 310. Prerequisite: SWU 302, 310. *General Studies SB*

**SWU 374 Diversity and Oppression in a Social Work Context. (3)**

*fa and spring*

Issues of social inequality related to race, ethnicity, gender, sexual orientation, and disability. Emphasize populations of the Southwest. Prerequisite: SW 310. *General Studies C*

**SWU 410 Social Work Practice II. (3)**

*fa and spring*

Knowledge and skills in social work practice with individuals and families. Prerequisites: PH 111 or 115 or 306, SW 310. Social Work major prerequisite: SWU 412, 413.

**SWU 411 Social Work Practice III. (3)**

*fa and spring*

Knowledge and skills in social work practice with groups, communities, and organizations. Prerequisites: SWU 410, 412, 413. Social Work major prerequisite: SWU 414, 415.

**SWU 412 Field Instruction I. (5)**

*fa 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)**

*fa and spring*

Field focused seminar including practice evaluation. 1.5 hours per week. Prerequisite: Social Work major. Corequisite: SWU 410, 412.

**SWU 414 Field Instruction II. (3)**

*fa and spring*

16 hours a week of supervised practice in an approved placement. Prerequisites: SWU 413. Social Work major. Corequisites: SWU 411, 415.

**SWU 415 Integrative Field Seminar. (3)**

*fa and spring*

Field focused seminar to help integrate practice and theory. Prerequisite: Social Work major. Corequisites: SWU 411, 414.

**SWU 432 Social Policy and Services. (3)**

*fa and spring*

Contemporary social, political, and economic issues. Special emphasis on poverty and inequality in the Southwest. Analysis and development of social welfare policy and programs. Prerequisite: ECN 111. Corequisites: SWU 410, 412, 413.

**SWU 442 Introduction to Practice with Children and Families in Child Welfare. (3)**

*fa 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)**

*fa 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 56.

Literacy and critical inquiry: **MA** mathematics, **CS** computer statistics, quantitative application, **HU** humanities, **SB** social and behavioral sciences, **SG** statistics, **EN** English—general core courses, **SQ** natural and quantitative, **C** cultural diversity, **U** Utah State, **G** global, **H** health care. See *General Studies*, page 8.

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# Graduate College

[www.asu.edu/graduate](http://www.asu.edu/graduate)

Bianca L. Bernstein, Ph.D., Dean

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## PURPOSE

Through the faculty, Arizona State University's 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 91 master's and 48 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, about 2,000 ASU graduate students were awarded prestigious fellowships and scholarships exceeding \$3.5 million. These awards were funded by the National Science Foundation, NASA, the Ford Foundation, Fulbright, and other public agencies and private foundations.

ASU assisted more than 2,500 outstanding graduate students through academic and tuition scholarship and other financial support programs. The total financial support amounted to \$175 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 conferences, colloquia, and special seminars to heighten the learning experience. The Office of the Vice Provost for Research 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 consequence 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, in master's and 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](http://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 the first step toward more advanced work, such as doctoral studies, which prepare students for a lifetime of intellectual inquiry and creativity or for the application of knowledge to professional practice.

## Interdisciplinary Graduate Degrees and Majors Overseen by the Graduate College

Major	Degree	Concentration	Administered By
Creative Writing Curriculum and Instruction	M.F.A., Ph.D. <sup>1</sup>	Art education, <sup>2</sup> curriculum studies, early childhood education, elementary education, English education, exercise and wellness education, <sup>3</sup> language and literacy, mathematics education, music education, physical education, science education, special education	Creative Writing Committee Interdisciplinary Committee on Curriculum and Instruction
Exercise Science	Ph.D.	Biomechanics, motor behavior sport psychology, physiology of exercise	Committee on Exercise Science
Justice Studies	Ph.D.	Criminal and juvenile justice; dispute resolution; law, justice and minority populations; law, policy, and evaluation; women, law, and justice	Committee on Law and Social Sciences
Materials Science	M.S.		Committee on the Science and Engineering of Materials
Science and Engineering of Materials	Ph.D.	High-resolution nanostructure analysis, solid-state device materials design	Committee on the Science and Engineering of Materials
Speech and Hearing Science	Ph.D.	Developmental neurolinguistic disorders, neuroauditory processes, neurogeriatric communication disorders	Committee on Speech and Hearing Science
Statistics	M.S.	—	Committee on Statistics

<sup>1</sup> This program is administered in collaboration with the College of Education.

<sup>2</sup> This concentration is administered in collaboration with the Herberger College of Fine Arts.

<sup>3</sup> Doctoral Courses for this interdisciplinary program administered by ASU Main are offered by ASU East.

**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 of 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 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 Public Administration (D.P.A.). 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 serious students enter graduate studies without intending to obtain a new degree but rather to enhance personal knowledge. They 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.

For admission information and procedures, access the Web site at [www.asu.edu/graduate/admissions](http://www.asu.edu/graduate/admissions), or refer to the *Applicant's Guide to Graduate Admission* booklet.

**Student Services for Nondegree Students.** The Graduate College maintains an advising office open year round. See “Graduate Student Support Services” page 52, for more information.

### Graduate Studies and 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 115 instructional units, the Graduate College works closely with the other colleges and academic units. In most cases, graduate instruction is

## GRADUATE COLLEGE

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 the Gerontology Program (Certificate in Gerontology jointly offered by ASU Main and ASU West), Creative Writing (M.F.A.), Curriculum and Instruction (Ph.D., jointly administered with the College of Education), Exercise Science (Ph.D.), Justice Studies (Ph.D.), Science and Engineering of Materials (Ph.D.), Speech and Hearing Science (Ph.D.), Statistics (M.S.), and Transportation Systems (Certificate in Transportation Systems).

Other interdisciplinary degree programs include Communication (Ph.D., administered by the College of Public Programs), History and Theory of Art (Ph.D.) (jointly offered with the University of Arizona; administered by the School of Art), Humanities (M.A.) (administered by the College of Liberal Arts and Sciences), and Molecular and Cellular Biology (M.S./Ph.D.) (administered by the College of Liberal Arts and Sciences).

Each of these programs utilizes resources and faculty from several disciplines. They promote cooperative research and instruction among faculty who share common interests but are housed in different academic units. They allow students to pursue degrees that are intellectually coherent but that bring together diverse strengths of the university. See the "Interdisciplinary Graduate Degrees and Majors Overseen by the Graduate College" table, page 517.

### **Creative Writing—M.F.A.**

The interdisciplinary Master of Fine Arts degree in Creative Writing options include fiction, nonfiction, playwrighting, poetry, and screenwriting. It 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 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 overseen jointly by the Graduate College and the College of Education. Areas of concentration are available in art education, curriculum studies, early childhood education, educational media and

computers, 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 or sport psychology, or physiology of exercise. For more information, see the *Graduate Catalog*.

### **Gerontology**

An interdisciplinary, 24 semester-hour Certificate in Gerontology is administered by the Committee on Gerontology. It may be earned by graduate students who wish to study the biological, psychological, sociological, and policy-related aspects of aging as well as the economic, health, and social concerns of older people. Students enrolled in the certificate program may simultaneously pursue a major in an academic unit offering a graduate degree or may enter the program as nondegree graduate students. The Certificate in Gerontology provides a broad academic foundation for students who wish to apply the knowledge and skills acquired in their major to a variety of aging-related pursuits. For more information, see the *Graduate Catalog*.

For information on the undergraduate minor in Gerontology, see "Gerontology," page 108.

## GERONTOLOGY (GRN)

### ASU Main

#### **GRN 430 Multidisciplinary Approaches to Gerontology. (3)**

*once a year*

Examines literature that each discipline brings to the study of gerontology. Covers both theory and practice. Lecture/discussion.  
*General Studies. SB*

#### **GRN 431 Caregiving. (3)**

*once a year*

Examines theory and practice of caregiving for the senior population. Lecture/discussion.

#### **GRN 440 Aging and Wellness. (3)**

*fall and spring*

One-on-one service experience learning with seniors from the community. May be repeated for credit. Lecture/lab.

#### **GRN 450 Biology of Aging. (3)**

*spring*

Examines normal biological aging and changes in the functional capabilities in the elderly. Lecture/lab.

#### **GRN 460 Alzheimer's and Related Dementias. (3)**

*fall and spring*

Familiarization with Alzheimer's disease and related dementias from a caregiver's perspective. Lecture/lab.

#### **GRN 484 Undergraduate Internship. (3-6)**

*fall, spring, summer*

#### **GRN 494 ST: Undergraduate Special Topics. (3)**

*fall and spring*

#### **GRN 498 PS: Undergraduate Pro-Seminar. (3)**

*spring*

#### **GRN 499 Undergraduate Individualized Instruction. (3)**

*fall, spring, summer*

**GRN 530 Multidisciplinary Approaches to Gerontology. (3)***once a year*

Examines literature that each discipline brings to the study of gerontology. Covers both theory and practice. Lecture/discussion.

**GRN 531 Caregiving. (3)***once a year*

Examines theory and practice of caregiving for the senior population. Lecture/discussion.

**GRN 540 Aging and Wellness. (3)***fall and spring*

One-on-one service experience learning with seniors from the community. Lecture/lab. Cross-listed as SWG 517. Credits allowed for only GRN 540 or SWG 517.

**GRN 550 Biology of Aging. (3)***spring*

Examines normal biological aging and changes in the functional capabilities of the elderly. Lecture/lab.

**GRN 560 Alzheimers and Related Dementias. (3)***fall and spring*

Familiarization with Alzheimer's disease and related dementias from a caregiver's perspective. Lecture/lab.

**GRN 584 Graduate Internship. (3-6)***fall, spring, summer***GRN 590 Graduate Reading and Conference. (3)***fall, spring, summer***GRN 591 Graduate Seminar. (1-6)***fall and spring***Omnibus Courses.** For an explanation of courses offered but not specifically listed in this catalog, see Omnibus Courses page 56.**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*.

**Justice Studies Ph.D.**

The interdisciplinary Doctor of Philosophy degree program with a major in Justice Studies is administered by the Committee on Law and Social Sciences. The degree program integrates historical, legal, and philosophical approaches with social science training. Areas of concentration include criminal and juvenile justice; dispute resolution, law, justice, and minority populations; law, policy and evaluation; and women, law, and justice. 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 Science and Engineering of Materials. Areas of concentration are available in solid state device materials design and high resolution nanostructure analysis. Emphasis is placed on the applications of chemical thermodynamics, the mechanics of solids, quantum mechanics and transport theory for investigation of the relationships between 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)**

See the *Graduate Catalog* for the SEM courses.

**Speech and Hearing Science—Ph.D.**

The interdisciplinary Doctor of Philosophy degree program with a major in Speech and Hearing Science is administered by the Committee on Speech and Hearing Science. Areas of concentration are available in developmental neurological disorders, neuroauditory processes, and neurological communication disorders. The purpose of the program is to prepare scholars for careers of basic and applied research in academia or in 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 Post baccalaureate Certificates" table page 112).

**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)**

See the *Graduate Catalog* for the TRC courses.

**Research Programs**

ASU continues to advance as a major research institution. The Office of the Vice Provost for Research 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 Manufacturing Institute, the Institute of Human Origins, the Hispanic Research Center, and the Preventive Intervent on Research Center. For further information on centers and institutes, see "Research Centers, Institutes, and Laboratories," page 30.

## GRADUATE COLLEGE

### Research Facilities

The university lends support to research in diverse ways, including extensive facilities for research and instructional programs. State-of-the-art facilities include architecture buildings, 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. Other facilities support research on campus are the Institute for Studies in the Arts, in the 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.

### Graduate Student Support Services

Providing academic and professional development support to graduate students is an important part of the Graduate College mission. Services include advising, 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 and nondegree students.

**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, return 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. Refer to "Financial Aid," page 52 for a full description of graduate financial support and services or visit the Web site at [www.asu.edu/graduate](http://www.asu.edu/graduate).

**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 opportunities and possibilities their degrees may provide upon graduation. The Graduate College provides the following resources:

**Advising.** The Graduate College's Academic Advising Office supplies general information about policies, procedures, requirements, and support services. Appointments are available throughout the year.

Students with reouaradmission status should contact their academic unit for degree program advisement and program study planning.

**Career Planning and Development Seminars.** The Graduate College, in conjunction with Counseling and Consultation, offers seminars to groups of graduate students interested in exploring career-related subject matter. Examples of seminar topics are dual career issues, the impact of values on career decision making, and transferable skills.

**Career Planning Services for Graduate Students.** In conjunction with Career Services and Counseling and Consultation, the Graduate College provides a brochure listing numerous career planning services for graduate student need. This publication is also available at [career.asu.edu](http://career.asu.edu).

**Diversity Programs.** The Graduate College's 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 the respective departments for nomination.

**Diversity Assistantship Program (DAP).** The purpose of this merit-based program is to support research and creative activities related to a student's field of study. Nominations are made by departments, and recipients are supervised by a faculty member.

**Academic Support Program (ASP).** The purpose of ASP is two-fold: financial assistance and peer mentoring. ASP is available primarily to first-year students; however, departments are asked to provide a student's subsequent funding. The program is based on financial need and the nominations of students by departments. Financial support is provided in the form of federal work study to support field-related research that is supervised by a faculty member. For additional academic support, a student meets weekly with an assigned peer mentor who is two or more years advanced in the academic program.

**The Social and Academic Mentor Program (SAM).** The Graduate College Social and Academic Mentor (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.** Each semester, the Graduate College hosts orientations for new graduate students and teaching assistants (TAs).

In addition to the General (new student) Orientation, teaching assistants have the opportunity to enrich and enhance their teaching through seminars offered each semester. At least two seminars are mandatory for first-time TAs. Among other topics, TAs can attend sessions on teaching lab sciences, human diversity, critical thinking, classroom management, ethical issues, and multimedia applications in the classroom.

**Workshops for Undergraduate Students Considering Graduate Education.** The Graduate College hosts workshops to address the 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 and funds with the Graduate College 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. Both 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/resources/student/formatinfo](http://www.asu.edu/graduate/resources/student/formatinfo).

**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 the Publications Unit at 480-965-3521.

### Graduate Council

The Graduate Council establishes general policies for graduate programs and serves as an advisory board to the dean. As part of its duties, the council reviews proposals for new degree programs and concentrations, regularly conducts reviews of established academic programs, and sets policies and general standards for graduate admissions. Sixteen faculty and one student serve on the council, representing a wide variety of degree programs with at least one member representing each college in the university. An Academic Senate representative is also elected to serve. Council members are appointed by the president of the university.

### 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 in the center of campus. Graduate College offices are open from 8 A.M. to 6 P.M., Monday through Thursday; and 8 A.M. to 5 P.M., on Friday.

For more information, call 480-965-3521, send e-mail to [gradadmiss@asu.edu](mailto:gradadmiss@asu.edu) about admissions or [asugrad@asu.edu](mailto:asugrad@asu.edu) about other topics, or access the Web site at [www.asu.edu/graduate](http://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) 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](http://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 \$ 5 to apply for nondegree studies. For admission information and procedures, access the Web site at [www.asu.edu/graduate/admissions](http://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 regulations of the Immigration and Naturalization Service in addition to the requirements of the Graduate College and the academic units to which they apply.

International applicants must meet the requirements of the Graduate College as well as those of the degree programs 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](http://www.asu.edu/graduate/admissions). International applicants should read this information carefully to become familiar with all the requirements they must meet, 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 *Petersson'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. Applicants whose native

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language is not English must submit a score from the Test of English as a Foreign Language (TOEFL). The TOEFL can be waived if the undergraduate degree is earned from an English-speaking institution. 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](http://www.asu.edu/graduate/admissions).

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. Immigration and Naturalization Service, international applicants must also verify that they have the financial resources to cover the expenses during graduate study at ASU. The Financial Guarantee form is available in the *Application for Graduate Admissions* booklet. It can also be accessed through the Graduate College Web site at [www.asu.edu/graduate/admissions](http://www.asu.edu/graduate/admissions). International applicant must ensure that the guarantee form and a verification from a bank or sponsoring organization is completed and submitted to 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 has 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 the formal application. Applications received without the fee are not processed.

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 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](http://www.asu.edu/graduate/admissions), or refer to the *Application for Graduate Admissions* 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. In addition, 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 matters relating to the application fee, see "Application Fee," page 521.

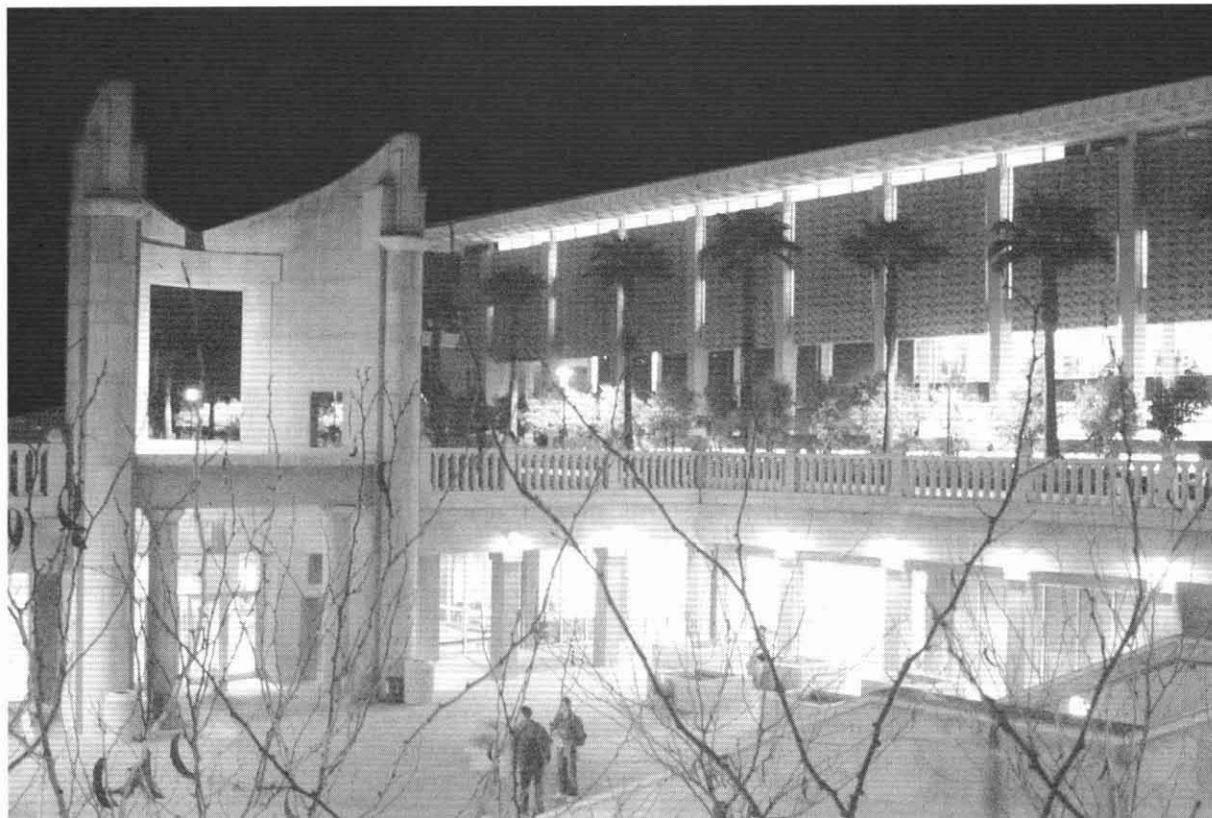
### Readmission to the Graduate College

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](http://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 may use only one catalog.



Hayden Library illuminated as night falls

Tim Trumble photo

## GRADUATE COLLEGE

### Enrollment Verification Guidelines for Graduate Students

	Full Time	Half Time	Less Than Half Time
<b>Regular semester</b>			
Graduate	9 or more hours	5-8 hours	4 or fewer hours
Graduate assistant*	6 or more hours		
<b>Five-week summer session</b>			
Graduate	3 or more hours	2 hours	1 hour
Graduate assistant*	2 or more hours	1 hour	
<b>Eight-week summer session</b>			
Graduate	5 or more hours	3-4 hours	2 or fewer hours

\* For enrollment verification purposes, "graduate assistant" is a generic term that includes graduate assistants, teaching assistants, research assistants, graduate associates, teaching associates, and research associates.

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 obtain and complete an official withdrawal form 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 courses registered. A student who officially withdraws from the university later than the fourth week receives a mark of "W" or "E," 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," 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" 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, students may withdraw with a mark of "W" from courses only in which the instructor certifies that they are 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 5 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.

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 hours of course work each semester, a third time (33 percent) assistant or associate for more than 13 hours; and a quarter time (25 percent) assistant or associate for more than 15 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. See "Residency Classification Policies and Procedures," page 53, and specific degree requirements for fulfilling residence requirements for other doctoral degree programs.

**Summer Course Loads.** Refer to the latest *Summer Sessions Bulletin* for course load limits for five week and eight week sessions.

**Enrollment Verification Guidelines.** The registrar is responsible for verifying enrollment according to the general guidelines. See the "Enrollment Verification Guidelines for Graduate Students" table, page 524.

**GRADUATE COLLEGE DEGREE REQUIREMENTS**

**Graduate Advising**

Advising is much more than technical support; it is an integral part of graduate education. Students' programs of study are generally tailored to meet individual needs, and students should seek advice from faculty or advisors as they plan their course work, examinations, and other degree requirements.

**Grading**

The "Grades" table, on this page, defines grades and gives their values.

A grade of "P" (pass) in a 400 level course may not appear on a program of study. Grades on transfer work or ASU law credit are not included in computing GPAs.

Grades of "D" and "E" 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" or "E" 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" or "E" 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. The student is not allowed to complete the course work 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".

**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.

**Grades**

Grade	Definition	Value
A	Excellent	4.00
B	Good	3.00
C	Passing	2.00
D	No graduate credit	1.00
E	Failure	0.00
I	Incomplete	
W	Withdrawal	
X	Audit	
Y	Satisfactory	
Z	Course in progress	

This grade is given whenever a student officially withdraws. This grade is usually given pending completion of courses.

**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. It is university policy that students filing grievances and those who are witnesses will be protected 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

## GRADUATE COLLEGE

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 designee 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 rules of procedure as state law, which satisfy due process requirements. The committee shall always meet with the student 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" 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 non-degree 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 may withdraw a student who is not progressing satisfactorily.

The designation of honors (*summum cum laude*, *magna cum laude*, and *cum laude*) is reserved for undergraduate. 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 approved 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 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 enrollment 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 admission 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 an "A" or "B" grade are applicable. Reserved credit earned before admission to a graduate degree program is classified as non-degree 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 a student in a program of study leading to a degree awarded by ASU. The number of hours transferred from other institutions may not exceed 70 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 110 hours of the master's program of study. The time limit it 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's 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 the 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:

- credits awarded by postsecondary institutions in the United States that lack candidate status or accredited status by a regional accrediting association
- credits awarded by postsecondary institutions for life experience
- credits awarded by postsecondary institutions for courses taken at nonaccredited institutions, e.g., government agencies, corporations, and industrial firms
- 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 different unit of credit than the ones prescribed by the Arizona Board of Regents are subject to conversion before being transferred to ASU.

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 an "A" or "B" grade) 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 theses and dissertations 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 dissertations.

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 50 percent 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. Students planning to take the examination must register in the Graduate College at least one month in advance of the examination date. 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 concentrations in choral conducting and solo performance), which requires three recitals and a research paper. The Ph.D. dissertation should be a valuable educational experience that demonstrates the candidate's 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/resources/student/formatinfo](http://www.asu.edu/graduate/resources/student/formatinfo) 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

## GRADUATE COLLEGE

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 catalogued. Information on the dissertation will appear in *Dissertation Abstracts International*.

### Application for Graduation

Students should apply for graduation 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 they apply for graduation, students are officially notified of any requirements for their degree that they have 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 re-filing 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.



The ballroom in Old Main, after the restoration of 2001

Tim Trumble photo

### Dates and Deadlines

The "Graduate College Calendar," in the current *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.

### Student Responsibility

It is the responsibility of the graduate student to know and observe 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 the student's 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 Senior Vice President and Provost, or as part of the *Student Affairs Policies and Procedures Manual*—STA 104-01, at [www.asu.edu/aad/manuals/sta/sta104-01.html](http://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 Provost for Research and on the Web at [www.asu.edu/aad/manuals/rsp/rsp111.html](http://www.asu.edu/aad/manuals/rsp/rsp111.html).

### Graduate College Policies and Procedures

For more detailed information on Graduate College policies and procedures, see the current *Graduate Catalog*.

### 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 detailed information on the Graduate Council appeals policies and procedures, see the current *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.

- 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.E.)
- 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 Education (Ed.D.)
- Doctor of Musical Arts (D.M.A.)
- Doctor of Philosophy (Ph.D.)
- Joint Doctor (J.D.)

## ASU Graduate Degrees

Major	Degree	Concentration	Campus
Accountancy and Information Systems	M.A., S		Main
Aerospace Engineering	M.S., M.S.E., Ph.D.		Main
Agribusiness	M.S.	Agribusiness management and marketing, food quality assurance	East
Anthropology	M.A.	Archaeology, bioarchaeology, linguistics, medical anthropology, museum studies, physical anthropology, social cultural anthropology	Main
	Ph.D.	Archaeology, physical anthropology, social-cultural anthropology	Main
Architecture	M.Arch.		Main
Art	M.A.	Art education, art history	Main
	M.F.A.	Ceramics, drawing, fibers, intermedia, metals, painting, photographic studies, photography, printmaking, sculpture, wood	Main
Asian Languages and Civilizations (Chinese/Japanese)	M.A.		Main
Bioengineering	M.S., Ph.D.		Main
Biology	M.S., Ph.D.	Ecology	Main

This major has formalized concentrations; other areas of study are available. Application are not being accepted at this time.

<sup>1</sup> This collaborative program is offered by the three state universities.

<sup>2</sup> This major is jointly offered with the University of Arizona.

<sup>3</sup> Student applies to this degree program through the College of Law and the Graduate College.

## ASU GRADUATE DEGREES

### ASU Graduate Degrees (continued)

Major	Degree	Concentration	Campus
Building Design	M.S.	Design knowledge and computing, energy performance and climate responsive architecture, facilities development and management	Main
Business Administration	M.B.A.		Main West Extended
	Ph.D.	Accountancy, computer information systems, finance, health services research, <sup>2</sup> management, marketing, 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, solid state chemistry	Main
Civil Engineering	M.S., M.S.E., Ph.D.		Main
Communication	M.A.		Main
	Ph.D.	Communicative development, intercultural communication, organizational communication	Main
Communication Disorders	M.S.		Main
Communication Studies	M.A.		West
Composition	M.M.		Main
Computational Biosciences	M.S.		Main
Computer Science	M.C.S., M.S., Ph.D.	—	Main
Construction	M.S.	Construction science, facilities, 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, social studies education	Main
	M.Ed.	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, social studies education	Main
		Secondary education	Extended

This major has formalized concentrations; other areas of study are available

<sup>1</sup> Applications are not being accepted at this time.

<sup>2</sup> This collaborative program is offered by the three state universities.

<sup>3</sup> This major is jointly offered with the University of Arizona

<sup>4</sup> Students apply to this degree program through the College of Law, not the Graduate College

ASU Graduate Degrees (continued)

Major	Degree	Concentration	Campus
Curriculum and Instruction continued	Ed.D.	Bilingual education, curriculum studies, early childhood education, elementary education <sup>2</sup> , English as a second language, Indian education, language and literacy, mathematics education, science education, secondary education, 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, music education, physical education, science education, special education	Main
Dance	M.F.A.		Main
Design	M.S.D.	Graphic design, industrial design, interior design	Main
Economics	M.S., Ph.D.		Main
Educational Administration and Supervision	M.Ed.		Main West Main Extended
	Ed.D.		
Educational Leadership and Policy Studies	Ph.D.		Main
Educational Psychology	M.A., M.Ed., Ph.D.	Learning, lifespan developmental psychology, measurement statistics and methodological studies, school psychology	Main
Educational Technology	M.Ed., Ph.D.	—	Main
	M.S., Ph.D., M.S.E.		Main Main Extended
Electrical Engineering			
Elementary Education	M.Ed.	Bilingual education, educational technology, ESL education, reading	West
Engineering <sup>3</sup>	M.E.		Main Extended
Engineering Science	M.S., M.S.E., Ph.D.		Main
English	M.A.	Comparative literature, English linguistics, literature and language, rhetoric and composition	Main
	Ph.D.	Literature, rhetoric composition and linguistics	Main
Environmental Design and Planning	Ph.D.	Design: history, theory, and criticism; planning	Main
Environmental Planning	M.E.P.	Landscape ecological planning, urban and regional development, urban design	Main
Environmental Resources	M.S.	GIS/remote sensing, natural resource management, range ecology	East
Exercise and Wellness	M.S.		East
Exercise Science	Ph.D.	Biomechanics, motor behavior/sport psychology, physiology of exercise	Main

<sup>1</sup> This major has formalized concentrations; other areas of study are available. Applications are not being accepted at this time.

<sup>2</sup> This alternative program is offered by the three state universities.

<sup>3</sup> This major is jointly offered by the University of Arizona.

<sup>4</sup> Students apply to the degree program through the College of Letters and the Graduate College.

## ASU GRADUATE DEGREES

### ASU Graduate Degrees (continued)

Major	Degree	Concentration	Campus
Exercise Science/Physical Education	M.S.		Main
Family and Human Development	M.S.	Family studies	Main
Family Science <sup>1</sup>	Ph.D.	Marriage and family therapy	Main
French	M.A.	Comparative literature, linguistics, literature	Main
Geography	M.A., Ph.D.		Main
Geological Sciences	M.S., Ph.D.		Main
German	M.A.	Comparative literature, language and culture, literature	Main
Health Services Administration	M.H.S.A.		Main
Higher and Postsecondary Education	M.Ed., Ed.D.	Higher education	Main
History	M.A.	Asian history, British history, European history, Latin American history, public history, U.S. history, U.S. Western history	Main
	Ph.D.	Asian history, British history, European history, Latin American history, U.S. history	Main
History and Theory of Art <sup>4</sup>	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.	Criminal and juvenile justice; dispute resolution; law, justice, and minority populations; law, policy, and evaluation; women, law, and justice	Main
Law <sup>5</sup>	D.		Main
Mass Communication	M.M.C.		Main
Materials Engineering	M.S., M.S.F.		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, music theory	Main
	D.M.A.	Choral conducting, music composition, music education, solo performance, instrumental, keyboard, piano accompanying, piano pedagogy, voice	Main
Music Education	M.M.	Choral music, general music, instrumental music, jazz studies	Main

<sup>1</sup> This major has formalized concentrations, but areas of study are available.

<sup>2</sup> Applicants are not be accepted at this time.

This collaborative program is offered by the three state universities.

<sup>4</sup> This major is jointly offered with the University of Arizona.

<sup>5</sup> Students apply to this degree program through the College of Law, not the Graduate College.

ASU Graduate Degrees (continued)

Major	Degree	Concentration	Campus
Natural Science	M.N.S.	Biology, chemistry, geological sciences, mathematics, microbiology, physics, plant biology	Main
Nursing	M.S.	Adult health nursing, community health nursing, community mental health/psychiatric nursing, family health nursing, parent-child nursing, women's health	Main
Nutrition	M.S.		East
Performance	M.M.	Music theatre/opera musical direction, music theatre/opera performance, performance pedagogy, piano accompanying	Main
Philosophy	M.A., Ph.D.		Main
Physical Education	M.P.E.		Main
Physics	M.S., Ph.D.		Main
Plant Biology <sup>1</sup>	M.S., Ph.D.	Ecology, photosynthesis	Main
Political Science	M.A., Ph.D.	American politics, comparative politics, international relations, political theory	Main
Psychology	Ph.D.	Behavioral neuroscience, clinical psychology, cognitive/behavioral systems, developmental psychology, environmental psychology, quantitative research methods, social psychology	Main
Public Administration	M.P.A.	Public information management, public management, public policy analysis and evaluation, urban management and planning	Main Extended
	Ph.D.		Main
Public Health <sup>3</sup>	M.P.H.	Community health practice, health administration and policy	Main
Recreation	M.S.		Main
Religious Studies	M.A.		Main
Science and Engineering of Materials	Ph.D.	High resolution nanostructure analysis, solid state device materials design	Main
Secondary Education	M.Ed.	Educational technology	West
Social and Philosophical Foundations of Education	M.A.		Main
Social Work	M.S.W.	Advanced direct practice; planning, administration, and community practice	Main Extended West
	Ph.D.		Main
Sociology	M.A., Ph.D.		Main
Spanish	M.A.	Comparative literature, language and culture, linguistics, literature	Main
	Ph.D.	Cultural studies, literature	
Special Education	M.A., M.Ed.	Gifted, mildly disabled, multicultural exceptional, severely multiply disabled Infants and young children	Main Main West

<sup>1</sup> This major has formalized concentrations, other areas of study are available

<sup>2</sup> Applications are not being accepted at this time

<sup>3</sup> This collaborative program is offered by the three state universities.

<sup>4</sup> This major is jointly offered with the University of Arizona

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	Campus
Speech and Hearing Science	Ph.D.	Developmental neurolinguistic disorders, neuroauditory processes, neurogerontologic communication disorders	Main
Statistics	M.S.	—	Main
Taxation	M.Tax.	—	Main
Teaching English as a Second Language	M.TESL	—	Main
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, security engineering technology	East
Theatre	M.A.	—	Main
	M.F.A.	Performance, scenography, theatre for youth	Main
	Ph.D.	Theatre for youth	Main

<sup>1</sup> This major has formalized concentration(s); other areas of study are available.

<sup>2</sup> Applications are not being accepted at this time

<sup>3</sup> This collaborative program is offered by the three state universities.

<sup>4</sup> This major is jointly offered with the University of Arizona.

<sup>5</sup> Students apply to this degree program through the College of Law, not the Graduate College.

**Dual Degrees**

Degrees	Administered By	Campus
J.D./M.H.S.A.	College of Law/School of Health Administration and Policy	Main
J.D./M.S. in Economics*	College of Law/Department of Economics	Main
J.D./Ph.D. in Justice Studies	College of Law/Committee on Law and Social Sciences	Main
M.A. in Anthropology/M.S. in Justice Studies	Department of Anthropology/School of Justice Studies	Main
M.A.I.S./M.B.A.	College of Business	Main
M.Arch./M.B.A.	School of Architecture/College of Business	Main
M.B.A./J.D.	College of Business/College of Law	Main
M.B.A./M.H.S.A.	College of Business	Main
M.B.A./M.S. in Economics	College of Business	Main
M.B.A./M.S. in Information Management	College of Business	Main
M.B.A./M.Tax.	College of Business	Main
M.B.A./Master of International Management	College 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)	Main
M.S.E. in Industrial Engineering/Master of International Management of Technology	Department of Industrial and Management Systems Engineering/ American Graduate School of International Management (Thunderbird)	Main

\* Applications for this program are not being accepted at this time.

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# International Programs

ipo.asu.edu

William G. Davey, Ph.D., Director

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## PURPOSE

As an emerging world class institution, Arizona State University seeks to interact with cultures throughout the world from both an intellectual and an educational point of view. The International Programs Office (IPO) endeavors to develop a global competence for students, faculty, and ASU as a whole. IPO therefore encourages students to study abroad, faculty to teach and conduct research in contact with scholars around the world, and academic units to develop fruitful forms of collaborative work with a variety of higher learning entities abroad.

The university, in its endeavors to fulfill these functions, takes notice of the rapidly changing conditions of the contemporary world. Canada and Mexico hold special relationships, as our neighbors and as our partners in the North American Free Trade Agreement. Europe is developing a supranational identity in the form of the European Community. The Pacific Rim constitutes one of the most dynamic economic regions of the world. All of these regions are interconnected through globalization and swiftly developing information channels. IPO assists the ASU community to:

(1) keep pace with the quickly changing contours of higher education and (2) play a leading role in the international arena.

IPO is administratively part of the Office of the Senior Vice President and Provost. Its functions include developing and administering university programs abroad, encouraging faculty participation in exchanges, and pursuing relationships with foundations and agencies intent on furthering the international character of ASU.

## ACADEMIC PROGRAMS

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 over 100 fall and spring semester, summer sessions, and year-long international programs for ASU resident credit.

**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. In general, 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. Normally, 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.

ASU has exchange agreements in several countries in Latin America, Asia, and Europe, as well as in Australia, New Zealand, and Canada. Program availability is under constant review.

**Study Abroad Programs.** Study abroad programs are arrangements with educational institutions in foreign countries. ASU students can study in these institutions and earn ASU resident credit for the courses taken (once on site). ASU students may be placed in special classes created for them, or they may study alongside students from other countries, depending on the nature of the program. Outgoing ASU students are charged a program fee, and arrangements are usually made for accommodations and other needs. Financial aid such as scholarships, grants, and loans may, in most cases, be applied to program costs.

Study abroad programs generally fall into one of three categories: language immersion programs, "island" programs, and programs in which courses are integrated with local students in many disciplines (these courses are offered in English). Immersion programs, in which students learn the language of the host country with little or no previous language knowledge, include programs in Germany, Israel, Italy, Mexico, and Portugal. "Island" programs are those in which students are not fully integrated into a foreign university but take courses specifically designed for the particular student.

**Area Studies Programs.** International Programs maintains close liaison with the ASU area studies programs, including the Center for Asian Studies, the Latin American Studies Center, the Program for Southeast Asian Studies, and the Russian and East European Language Consortium, among others. Many IPO programs are specifically designed for students in these areas.

**Related Programs.** 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 College of Business maintains an advising service for College of Business students intending to study abroad. The College of Engineering and Applied Sciences and the Corporate Leaders Program also

## INTERNATIONAL PROGRAMS

actively place students in study programs and internships around the world.

**Procedures.** Students interested in participating in such programs should identify their interests as soon as possible. Students should express their interests to the International Programs Office in TMPCT B198; if needed, students are directed to other offices. It is essential to consult with a departmental program advisor, since the return of credits ultimately depends on the concurrence of the faculty advisors. Students on an official study abroad or exchange program retain the catalog status they held at the time of their departure.

Information on the status of programs can be obtained from the International Programs Office in TMPCT B195, from the IPO Web page at [ipo.asu.edu](http://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 Qualifying Application. An interview is then conducted at which time qualified applicants are guided through any additional

application procedures that are specific to the student's particular international program. After the application process is completed, students attend pre-departure orientations conducted by IPO. These presentations are designed to thoroughly prepare participants for a rewarding international experience.

### OTHER ACTIVITIES

The International Programs Office seeks to encourage a wide range of other academic activities. These activities include exchanges of faculty members and the development of institutional relationships with universities overseas to encourage joint research projects. As part of IPO, the Office of Immigration Programs for International Faculty and Scholars also assumes responsibility for a considerable number of international visitors who come to visit, work, study, or conduct research on the ASU campus. IPO also serves the ASU and local community by operating one of the nation's first U.S. Passport Offices located at a state university.

### Semester and Academic Year Study Abroad and Exchange Programs<sup>1</sup>

Country	City	University/Institution	Study Category <sup>2</sup>	Semesters Available <sup>3</sup>	Study Areas <sup>4</sup>
Argentina	Buenos Aires	University of Belgrano	SA	F, S, AY	B, L, C, E, T, A, O
Australia	Brisbane	Queensland University of Technology	Both	F, S, AY	C, E, A, O
		University of Queensland	SA	F, S, AY	B, L, C, F, E, T, A, O
	Melbourne	Royal Melbourne Institute of Technology	Both	F, S, AY	B, L, C, F, E, T, A, O
		University of Melbourne	SA	F, S, AY	B, F, A, O
	Perth	Edith Cowan University	Both	F, S, AY	B, F, E, T, A, O
	Sydney	Macquarie University	SA	F, S, AY	B, L, A, O
Austria	Krems	University of New South Wales	SA	F, S, AY	B, L, C, F, E, T, A, O
		University of Tasmania	SA	F, S, AY	B, L, C, F, E, T, A, O
		College of Technical Programs	EX	F, S, AY	L, T, O
Belgium	Brussels, EU	American University World Capitals Program	SA	F, S	B, I
	Brussels	American University World Capitals Program	SA	S	B, L, I
Bolivia	La Paz	Catholic University of Bolivia	EX	F, S, AY	B, L, C, F, E, T, A, O
Canada	Montreal	University of Montréal	EX	F, S, AY	O
	Quebec	Laval University	EX	F, S, AY	B, L, F, E, A, O
	Vancouver	University of British Columbia	EX	F, S, AY	B, F, E, A, O
Chile	Santiago	American University World Capitals Program	SA	S	L, A, I
	Valparaiso	Catholic University of Valparaiso	SA	F, S	B, L, C, F, E, A, O
China	Beijing and Hong Kong	American University World Capitals Program at Beijing University	SA	S	L, A, I
Costa Rica	San Jose	University of Costa Rica	EX	F, S, AY	B, L, C, F, E, A, O

Information is subject to change without notice.

<sup>1</sup> Study category abbreviations: SA = study abroad; EX = exchange; Both = study abroad and exchange.

<sup>2</sup> Semester abbreviations: F = fall; S = spring; AY = academic year.

<sup>3</sup> Study areas abbreviations: B = business; L = languages; C = communication; F = fine arts; E = engineering; T = tourism.

<sup>4</sup> A = liberal arts; I = international; O = other.

<sup>5</sup> Graduate students only.

INTERNATIONAL PROGRAMS

Semester and Academic Year Study Abroad and Exchange Programs<sup>1</sup> (continued)

Country	City	University/Institution	Study Category	Semesters Available <sup>3</sup>	Study Areas <sup>4</sup>
Cuba	Havana	University of La Habana	SA	F, S, AY	LFA
Czech Republic	Prague	American Institute for Foreign Study	SA	F, S, AY	LFAI
		American University World Capitals Program	SA	F, S	LFAI
Denmark	Copenhagen	University of Copenhagen	EX	S, AY	BLFAI
Ecuador	Quito	Pontific Catholic University of Ecuador	EX	F, S, AY	BLCEAO
Egypt	Cairo	American University in Cairo	SA	F, S, AY	EA
England	Brighton	University of Brighton	EX	S	O
	Cambridge	INSTEP	SA	F, S	BAI
	Hull	University of Hull	EX	F, S, AY	BLFEAO
	Leeds	University of Leeds	EX	F, S, AY	BLCFEAO
	London	Birbeck College	SA	F, S, AY	BCFLI
	London	London School of Economics and Political Science	SA	AY	BLEA
	London	Richmond American International University	SA	F, S, AY	BCFEAI
	London	ASU London International Internships	SA	F, S	I
	London	AUWCP at University of Westminster	SA	F, S	BCFAI
	London	American Intercontinental University	SA	F, S, AY	BLCFATIO
France	Wolverhampton	University of Wolverhampton	EX	F, S, AY	BLFEAO
	Grenoble	University of Grenoble	EX	AY	BLCEAO
	Lille	Catholic University of Lille, Intensive Language	SA	S	L
	Lille	Catholic University of Lille	SA	S, AY	BLCEAO
	Paris	American University World Capitals Program	SA	S	LAI
Germany	Berlin	American University World Capitals Program	SA	F	LATIO
	Heidelberg	University of Heidelberg	EX	AY	BLAO
	Koln	Koln Technical College	EX	F	O
	Regensburg	University of Regensburg	EX	AY	BLAO
	Stuttgart	University of Stuttgart	EX	AY	BEAO
	Tubingen	University of Tubingen, Intensive Language	SA	S	L
	Tubingen	University of Tubingen	EX	S, AY	BLAO
Ireland	Cork	University College Cork	SA	F, S, AY	BLFEA
	Dublin	University College Dublin	SA	F, S, AY	LFA
	Limerick	University of Limerick	SA	S, AY	BLCEAO
Israel	Jerusalem	Hebrew University of Jerusalem	SA	F, S, AY	LA
	Beer Sheva	Ben Gurion University	SA	F, S, AY	LATIO
	Tel Aviv	Tel Aviv University	SA	F, S, AY	BLFA
Italy	Castellanza	Carlo Cattaneo University	EX	F, S, AY	BL
	Florence	Richmond American International University	SA	F, S, AY	BLFAI
	Florence	Dante Alighieri Italian Linguistic Center	SA	F, S, AY	L
	Rome	American University World Capitals Program	SA	F, S, AY	LFA

Information is subject to change without notice.

Study category abbreviations: SA study abroad, EX exchange. Both study abroad and exchange.

<sup>3</sup> Semesters available abbreviations: F fall, S spring, AY a year.

<sup>4</sup> Study areas abbreviations: B business law, L languages, C communication, F fine arts, E technical/engineering, I international, O other.

Graduate students only.

## INTERNATIONAL PROGRAMS

### Semester and Academic Year Study Abroad and Exchange Programs<sup>1</sup> (continued)

Country	City	University/Institution	Study Category <sup>2</sup>	Semesters Available <sup>3</sup>	Study Areas <sup>4</sup>
Japan	Hiroshima	Hiroshima Shudo University	EX	AY	BLA
	Nagoya	Nanzan University	EX	AY	BLFA
	Osaka	Kansai Gaidai University	EX	AY	BLCA
	Wakayama	Wakayama University	EX	AY	BEO
Macedonia	Skopje	University of Saints Cyril and Methodius	SA	F, S, AY	LA
Mexico	Various including Mexico City	Monterrey Institute for Technical and Superior Studies	EX	F, S, AY	BLCETAIO
		Guadalajara	Autonomous University of Guadalajara	EX	F, S, AY
	Obregon	Sonora Technological Institute	EX	F, S, AY	BLETAO
	Hermosillo	University of Sonora	EX	F, S, AY	BLCFEAO
	Mexico City	Autonomous Technological Institute of Mexico	EX	F, S, AY	BEA
	Monterrey	Autonomous University of Nuevo Leon	EX	F, S, AY	BLCFEO
Netherlands	Breda	Netherlands Institute of Tourism and Transport	EX	F, S, AY	T
New Zealand	Auckland	University of Auckland	SA	F, S, AY	BLCAO
	Dunedin	University of Otago	SA	F, S, AY	BLFEA
	Hamilton	University of Waikato	Both	F, S, AY	BLCFETAO
Northern Ireland	Ulster	University of Ulster	EX	F, S, AY	BLCEAO
Norway	Oslo	University of Oslo	SA	F, S, AY	LAO
Peru	Lima	Graduate School of Business Administration <sup>5</sup>	EX	F, S, AY	B
Portugal	Various	The Language Center	SA	F, S, AY	L
Romania	Cluj Napoca	Babes Bolyai University	EX		L
Russia	Moscow	Finance Academy Under the Government of the Russian Federation	EX	F, S, AY	B
	Moscow	American University World Capitals	SA	F	LI
Scotland	Edinburgh	Edinburgh College of Art	EX	F, S, AY	F
	Edinburgh	University of Edinburgh	Both	AY	BLCFEA
	Glasgow	Strathclyde University	EX	F, S, AY	BLCEAO
Spain	Granada	Center for Modern Languages, University of Granada	SA	S, AY	LA
	Granada	University of Granada	EX	S, AY	BLFEAO
	Madrid	American University World Capitals Program	SA	S, AY	LAI
	Madrid	Carlos III University of Madrid	EX	S, AY	B
S. Africa, Zimbabwe	Cape Town, Harare	American University World Capitals Program	SA	F	AI
Sweden	Kalmar	University of Kalmar	EX	F, S, AY	BLCETA
	Orebro	Orebro University	EX	F, S, AY	BLA
Thailand	Bangkok	Thammasat University	EX	F, S, AY	BLA
Various	Various	Semester at Sea	SA	F, S, AY	BCFAO

<sup>1</sup> Information is subject to change without notice.

<sup>2</sup> Study category abbreviations: SA—study abroad, EX—exchange, Both—study abroad and exchange.

<sup>3</sup> Semesters available abbreviations: F—fall, S—spring, AY—all year.

<sup>4</sup> Study areas abbreviations: B—business/law, L—languages, C—communication, F—fine arts, E—tech engineering, T—tourism, A—liberal arts/sciences, I—internship, O—other.

<sup>5</sup> Graduate students only.

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# Summer Sessions

[www.asu.edu/ssc](http://www.asu.edu/ssc)

Carol Switzer, M.S., Director

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## PURPOSE

The summer sessions, offering more than 3,000 fully accredited courses, provide 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.

There are three regular sessions: one of eight weeks and two of five weeks. The eight-week session and the first five-week session begin the same date. See the "University Calendar," page 17, for specific dates.

All ASU Main courses (except some EPE courses) are held in air-conditioned classrooms or laboratories. A limited number of courses are offered at off-campus locations.

During the summer, ASU also offers students the opportunity to earn graduate or undergraduate credit while studying in foreign countries through various Summer Study Programs. 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/ssc](http://www.asu.edu/ssc).

**Admission and Registration.** The admission and registration process for summer sessions begins when the *Summer Sessions Bulletin* is distributed at the end of January.

**Admission.** All students must be admitted to ASU for the summer as a nondegree student before enrolling, except for continuing students attending ASU during the spring semester preceding the summer. New ASU students admitted for the fall semester following the summer must process the summer nondegree admission form before enrolling.

**Nondegree Graduate or Undergraduate.** An application form is provided in the *Summer Sessions Bulletin* and is also available on the Web at [www.asu.edu/ssc/bulletin](http://www.asu.edu/ssc/bulletin) application. The submission of transcripts or test scores is not required for this status.

**Readmission.** ASU students not enrolled during the spring semester preceding the current summer must be readmitted. See "Readmission to the University," page 70.

Conditional admission before graduation from high school may be granted. See "Admission Before Receipt of Final Transcript," page 59.

**Advising.** All students are strongly encouraged to seek academic advising before enrolling in summer courses. See "Academic Advising," page 69.

**Bulletin.** The *Summer Sessions Bulletin*, which contains the class schedule, the application form, and the registration procedure, is available the last week of January at the Office of Summer Sessions, ADM B167, and at all registration sites.

The *Summer Sessions Bulletin* is also available on the Web at [www.asu.edu/ssc](http://www.asu.edu/ssc).

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 873003  
TEMPE AZ 85287 3003

**Food Services.** Meal plans are available. For more information, call 480-965-3464 or write:

SODEXHO MARRIOTT 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 64.

**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. 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. See the *Summer Sessions Bulletin*.

# ASU Main Directory

For the "ASU East Directory," see page 683. For the "ASU West Directory," see page 694. For the "ASU Extended Campus Directory," see page 713.

Organization	Location	Telephone	Web Address
Academic Transfer Articulation Office	ADM B362	480 965 8332	www.asu.edu/provost/articulation
Academic Transfer Programs		480 965 8332	www.asu.edu/admissions/transfercenter
Course Equivalency Guide		480 965 9172	www.asu.edu/provost/articulation
General Studies Guides		480/727-6599	www.asu.edu/provost/articulation
Transfer Guides		480/727 6599	www.asu.edu/provost/articulation
Accounts Receivable	ADM A109	480 965 6341	www-comp.vpas.asu.edu
Admissions			
Graduate	WILSN 101	480 965 6113	www.asu.edu/graduate/admissions
Law	LAW 101	480 965-1474	www.aw.asu.edu
Readmissions Undergraduate	SSV 142	480 965 7440	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/student/life/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/architecture
Design School of	AED 154	480 965-4135	www.asu.edu/caed/design
Herberger Center for Design Excellence	ARCH 119	480 965 6693	www.asu.edu/caed/herberger
Planning and Landscape Architecture, School of	AED 158	480 965 7167	www.asu.edu/caed/planning
Arizona Drug and Gang Prevention Resource Center	ASUDC B2	480 727 5015 1 888 432 2547	www.asu.edu/adgprc
Arizona Prevention Resource Center	ASUDC B2	480 727 2772 1-800-432 2772	www.asu.edu/aprc
Associated Students of ASU ASAS	MU 310	480 965 3161	www.asu.edu/asasu
ASU Alumni Association	MAIN 200	480 965 2586	www.asu.edu/alumni
Administration	MAIN 200	480 965 2086	
Alumni Publications ASU Vision Magazine	MAIN 200	480/727-6280	
Alumni Relations	MAIN 200	480 965-5276	
Alumni Travel	MAIN 200	480 965 0099	
Business Office	MAIN 200	480 965 9357	
Campuses, Chapters, and College Associations	MAIN 200	480 965-5276	
Career Programs	MAIN 200	480/965-5074	
Membership/Marketing	MAIN 200	480 965-8346	
Records Department	MAIN 200	480 965 2127	
Reunions	MAIN 200	480 965-4282	
Traditions	MAIN 200	480 965 7754	
Scholarships Alumni Development	MAIN 200	480 965-4034	
Student Relations	MAIN 200	480 965 7754	
Sun Devil Advocates (Grass Roots Network)	MAIN 200	480 965 4078	
ASU West Alumni Programs	FAB S363	602 543 5315	
ASU East <sup>1</sup>		480 727 3278	www.east.asu.edu

<sup>1</sup> See "ASU East Directory," page 683.

<sup>2</sup> See "ASU Extended Campus Directory," page 713.

See "ASU West Directory," page 694.

ASU MAIN DIRECTORY

Organizat on	Location	Te ephone	Web Address
ASU Extended Campus <sup>2</sup>	—	480/965-3046	www.asu.edu/xed
ASU Main		480 965 9011	www.asu.edu
ASU West <sup>3</sup>	—	602/543-5500	www.west.asu.edu
Bookstore ASU	BKSTR	480 965 7928	bookstore.asu.edu/index2.htm
Business, College of	BA 109	480/965 4227	www.cob.asu.edu
Accountancy and nformation Management, School of	BA 223	480/965-3631	www.cob.asu.edu/acct
Business Administration (M.B.A.)	BA 160	480/965 3332	www.cob.asu.edu/mba
Business Administration (Ph.D.)	BA 151	480/965 3368	www.cob.asu.edu/grad/phd
Economics, Department of	BAC 659	480/965-3531	www.cob.asu.edu/ecn
Finance, Department of	BAC 519	480/965 3131	www.cob.asu.edu/fn
Health Administration and Policy, School of	BA 318	480/965 7778	www.cob.asu.edu/hap
International Business Studies Management, Department of	BA 109	480/965 0596	www.cob.asu.edu/up/ipo.cfm
Marketing, Department of	BA 323	480/965 3431	www.cob.asu.edu/mgt
Small Business, Center for the Advancement of	BAC 460	480/965-3621	www.cob.asu.edu/mkt
Supply Chain Management, Department of	BAC 111	480/965-3962	www.cob.asu.edu/up/smallbusiness.cfm
Supply Chain Management, Department of	BA 446	480 965-6044	www.cob.asu.edu/scm
Campus Dining Services	MU 138	480 965 3464	www.asucampusdining.com
Career Services	SSV 329	480 965 2350	career.asu.edu
Cashiering Services	SSV 244	480 965 7468	www.compvpas.asu.edu
Child and Family Services	MU 14C	480 965 9515	www.asu.edu/vpsa/family
Co-Curricular Programs	MCL 109B	480 965 9600	www.asu.edu/vpsa/partnership
Community Service Program	MU 303	480/965 2255	www.asu.edu/mu/community
Counseling and Consultation	SSV 334	480 965 6146	www.asu.edu/counselingcenter
	SHS A168	480 965 4726	
Creative Writing (M.F.A.)	LL 307C	480 965 3528	www.asu.edu/class/english/creativewriting
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/coe
Computer Support/Student Computer Lab	EDB 122	480 965 2126	coecs.asu.edu
Curriculum and Instruction, Division of	ED 426	480 965 1644	www.ed.asu.edu/coe/candi
Curriculum and Instruction, Graduate Program Office	ED 434	480 965 4602	ha.asu.edu/cn/home.htm
Dean's Office	EDB 104	480 965 3306	courses.ed.asu.edu/deanos
Education Policy Studies Laboratory	EDB 4 01	480 965-1886	www.asu.edu/educ/eps
Educational Leadership and Policy Studies, Division of	ED 120	480 965 6357	www.ed.asu.edu/eps
Educational Research and Services, Bureau of	ED 140	480 965 3538	bers.asu.edu
Indiana Education Center for	ED 402	480 965 6292	www.asu.edu/educ/ce
Professional Field Experiences, Office of (Student Teaching)	EDB L1 14	480 965 6255	www.ed.asu.edu/coe/pfe
Psychology in Education Admissions Information Recording, Voice Mail		480 965 6420	
Psychology in Education, Division of	EDB 302	480 965 3384	coe.asu.edu/psyched

<sup>1</sup> See "ASU East Directory," page 683.

<sup>2</sup> See "ASU Extended Campus Directory" page 713.

<sup>3</sup> See "ASU West Directory," page 694.

## ASU MAIN DIRECTORY

Organization	Location	Telephone	Web Address
Educational Opportunity Center	1000 E Apache No. 118	480/894 8451	www.asu.edu/studentlife/eoc
College of Education, Center for Educational Equity and Language Diversity	ED 440	480 965 7134	www.asu.edu/educsucceed
Student Services Office of Academic Advising and Certification	EDB L1 13	480 965 5555	coe.asu.edu/osa
Student Services Office of Recruitment and Support Programs Tutoring Scholarships	EDB L1 19	480 965 5555	coe.asu.edu/osa
College of Engineering and Applied Sciences	ECG 100	480 965 3421	www.eas.asu.edu
Biomechanical Engineering Department	ECG 334	480 965 3028	www.eas.asu.edu/bme
Chemical and Materials Engineering Department	ECG 202	480 965 3313	www.eas.asu.edu/cme
Civil and Environmental Engineering Department	ECG 252	480 965 3589	www.eas.asu.edu/~civ
Computer Science and Engineering Department	GWC 206	480 965 3190	cse.asu.edu
Construction Development Webb School of Electrical Engineering Department	SCOB 241	480 965 3615	construction.asu.edu
Engineering Department	ENGR 552	480 965 3424	www.eas.asu.edu/ee
Industrial Engineering Department	ECG 104	480 965 1726	
Mechanical and Aerospace Engineering Department	GWC 502	480 965 3185	www.eas.asu.edu/mse
	ECG 346	480 965 3291	www.eas.asu.edu/mae
Equity Opportunity Affirmative Action TTY	ADM B171	480/965 5057 480/965 0471	www.eoaa.asu.edu
Exercise Science Ph.D.	PEBW M201	480 965 906	www.asu.edu/cas/espe
Extended Education, College of <sup>2</sup>	DTC C319	480/965 3046	www.asu.edu/xed
FASTT Financial Aid Services Through Technology			www.asu.edu/fa
Fine Arts Herberger College of Art School of	GHALL 132	480/965-6536	herbergercollege.asu.edu
Dance Department of	ART 102	480/965 3468	herbergercollege.asu.edu/art
Music School of	PEBE 107A	480 965 5029	herbergercollege.asu.edu/dance
Theatre Department of	MUS C E185	480 965-3371	herbergercollege.asu.edu/music
Fine Arts Box Office	GHALL 232	480 965 5337	herbergercollege.asu.edu/theatre
Freshman Year Experience	FAC	480 965 6447	
Gerontology Certificate	SSV 176	480 965-1512	www.asu.edu/vpsa/fye
Graduate College	WHALL 116	480 965 3225	www.asu.edu/graduategerontology
Admissions	W LSN lobby	480 965 3521	www.asu.edu/graduate
Advising Office	W LSN 101	480 965-6113	www.asu.edu/graduate
Financial Assistance	W LSN lobby	480 965-3521	www.asu.edu/graduate/check-st.htm#ADVISING
Format Office	W LSN 123	480 965 3521	www.asu.edu/graduate/financialia.htm
		480 965 3521	www.asu.edu/graduate/resources/student/formatinfo
General Office	—	480 965-3521	
Scholarships	—	480 965-3521	
Graduation Section			www.asu.edu/register/graduation
Commencement Office	ADM B167	480 965 6611	www.asu.edu/sc/commence
Graduate Division	SSV 140	480 965 698	
Undergraduate Division	SSV 140	480 965 3256	

See ASU East Directory page 653

See "ASU Extended Campus Directory" page 13

See ASU West Directory page 64

Organizat on	Locat on	Te ephone	Web Address
Greek Life	MU 305	480/965 2255	www.asu.edu/mu/greek/fe
Health and Wellness Center	SHS	480 965-3346	www.asu.edu/health
Appointments		480 965 3349	
Fax		480 965 8914	
Measures Information		480 965 8177	
Honors College, Barrett	IRISH A121	480/965-2359	www.asu.edu/honors
Human Resources Customer Service Center	ADM B263	480 965 2701	www.asu.edu/hr
Information Technology	—	—	www.asu.edu/it
Computer Accounts Office	CPCOM 105	480/965 1211	www.asu.edu/it/fyi/accounts
Computing Site Hours	—	480 965-6500	www.asu.edu/it/fyi/sites/siteschedule.htm
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 Systems (GIS) Services	CPCOM 235	480/965 4007	www.asu.edu/gis/ab
Help Desk	CPCOM 202	480 965-6500	www.asu.edu/helpdesk
Instruction Support Lab	CPCOM 213	480 965-6739	is.asu.edu
Visualization Services	CPCOM 235	480 965 9699	www.asu.edu/visualization
International Programs Office	TMPCT B198	480 965 5965	po.asu.edu
International Student Office	SSV 265	480/965-7451	www.asu.edu/student/fe/so
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	
TTY		480 965 2048	—
Learning Resource Center	SSV 394	480/965 6254	www.asu.edu/vpsa/lrc
Lbera Arts and Sciences, College of	SS 111	480 965-6506	www.asu.edu/cas
Aerospace Studies, Department of	TC 324	480 965 3181	www.asu.edu/cas/afrotc
African American Studies Program	COWDN 227	480 965 4399	www.asu.edu/cas/afamstu
Anthropology, Department of	ANTH 233	480 965 6213	www.asu.edu/cas/anthropology
Biology, Department of	LSC 226	480 965 3571	sciences.asu.edu/biology
Chemistry and Biochemistry Department of	PS D102	480 965 3461	www.asu.edu/cas/chemistry
Chinese and Chinese Studies, Department of	COWDN 224	480 965 5091	www.asu.edu/cas/china
English, Department of	LL 542	480 965-3168	www.asu.edu/cas/english
Exercise Science and Physical Education, Department of	PEBW M212	480 965 3875	www.asu.edu/cas/espe
Family and Human Development, Department of	COWDN 106	480 965 6978	www.asu.edu/cas/frhd
Geography, Department of	SCOB 340H1	480 965 7533	geography.asu.edu
Geological Sciences, Department of	PS F686	480 965-5081	geology.asu.edu
History, Department of	SS 204	480 965 5778	www.asu.edu/cas/history
Interdisciplinary Humanities Program	LL 641	480 965 6747	www.asu.edu/cas/humanities
Languages and Literatures Department of	LL 440	480 965-6281	www.asu.edu/languages/index.htm
Mathematics and Statistics Department of	PS A216	480 965 3951	math.a.asu.edu
Microbiology, Department of	LSE 210	480 965 1457	sciences.asu.edu/microbiology

<sup>1</sup> See "ASU East Directory," page 683.

<sup>2</sup> See "ASU Extended Campus Directory," page 713.

<sup>3</sup> See "ASU West Directory," page 694.

## ASU MAIN DIRECTORY

Organization	Location	Telephone	Web Address
Liberal Arts and Sciences College of continued			
Mock and Cellular Biology	LSE 44	480 965 743	libas.asu.edu/mcb
Mock and Bioscience and Biotechnology	LSE 218	480 965 3414	libas.asu.edu/mbb
Mathematical Sciences, Department of	TC B100	480 965 3318	www.asu.edu/cas/math
Philosophy, Department of	PS A524	480 965 3394	www.asu.edu/cas/philosophy
Physics and Astronomy, Department of	PS F470	480 965 3561	phy.asu.edu
Plant Biology, Department of	LS E218	480 965 3414	libas.asu.edu/plantbiology
Political Science, Department of	MCENT 2 5	480 965 6551	www.asu.edu/cas/polsci
Psychology, Department of	PSY 237	480 965 3326	psych.asu.edu
Reigious Studies, Department of	ECA 377	480 965 7145	www.asu.edu/cas/reigiousstudies
Sociology, Department of	SS 321	480 965 3546	www.asu.edu/cas/sociology
Speech and Hearing Science Department of	LL 173A	480 965 2374	www.asu.edu/cas/shs
Women's Studies Program	ECA 209	480 965 2358	www.asu.edu/cas/womensstudies
Libraries (See 'University Libraries,' page 546.)			
Memorial Union	MU		www.asu.edu/mu
Administrative Offices	MU mezzanine	480 965 5310	www.asu.edu/mu/staff.htm
Event and Meeting Services Information Desk	MU 1st level	480 965 3406	www.asu.edu/mu/ems.htm
Lost and Found	MU 1st level	480 965 5728	
Montgomery Computer Lab and Workroom	MU 1st level	480 727 6663	www.asu.edu/mu/lab.htm
Sparky's Den	Mountain level	480 965 3646	www.asu.edu/mu/recreation.htm
Multicultural Student Center	SSV 394	480 965 6060	www.asu.edu/studentfe/mcsc
New Student Programs	SSV 110	480 965 2880	www.asu.edu/admissions/newstudentprograms
Nursing, College of	NUR 344	480 965 3244	nursing.asu.edu
Community Health Services Clinic		480 941 9283	nursing.asu.edu/chs
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/student-services
Operator, University		480 965 9011	
Parents Association (Programs)	SSV 110	480 965 2602	www.asu.edu/admissions/parentprograms
Parking and Transit Services	TOWER 107	480 965 6406	www.asu.edu/dps/pts
Programming and Visual Arts	MU 304	480 965 6649	
Public Programs College of	W LSN 234	480 965 1034	www.asu.edu/copp
Advanced Public Executive Program	ASUDC C-110	480 965 4006	www.asu.edu/copp/apep
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	compp.asu.edu
Journalism and Mass Communication Water Cronkite School of	STAUF A231	480 965 5011	www.asu.edu/cronkite
Justice Studies, School of	W LSN 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 346	480 965 0607	www.asu.edu/copp/nonprofit
Public Affairs, School of	W LSN 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	ssw.asu.edu
Urban Inquiry, Center for	AG 320B	480 965 9216	www.asu.edu/copp/urban

See "ASU East Directory," page 633.

<sup>2</sup> See "ASU Extended Campus Directory," page 634.

See "ASU West Directory," page 634.

ASU MAIN DIRECTORY

Organizat on	Locat on	Te ephone	Web Address
Readm ss ons (Undergraduate)	SSV 142	480 965 7440	www.asu.edu/registrar/readmissions
Registrar	SSV 140		www.asu.edu/registrar
Exped te		480 965 4747	
TTY		480 965 3236	
Vo ce		48 965 3124	
Res dency Class ficat on	SSV 146	480 965 7712	www.asu.edu/registrar/residency
Res dent al L fe	SSV 170	480 965 3515	www.asu.edu/res fe
Science and Engineer ng of Materia s (Ph.D)	PS B135	480 965 2460	www.asu.edu/graduate/SEM
Speech and Hear ng Science Ph D	CSB 146	480 965 2373	www.asu.edu/cias/shs
Stat stics (M S )	BAC 570	480 965 2671	www.asu.edu/graduate/statistics
Student Affa rs Research and Eva uat on Off ce	MU 14D	480 965 4070	www.asu.edu/vpsa/research
Student Ad Disbursement	SSV 235	480 965 2956	www.asu.edu/fastt/app y d/sbursement.htm
Student Bus ness Serv ces	ADM A105	480 965 6301	
Student Deve opment	MU Mezzanine	480/965 5310	www.asu.edu/vpsa/sd
Student Emp oyment	SSV 202		www.asu.edu/fa/studemp
Off Campus		480 965 6318	
On Campus		480 965 5186	
Student F nanc a Assistance	SSV 216A	480/965 3355	www.asu.edu/fa
Student D Sun Card	MU 190	480 965 2273	www.su card1.com
Student Leadersh p Programs	MU 340	480 965 2255	www.asu.edu/vpsa/s p
Student L fe	SSV 263	480 965 6547	www.asu.edu/student fe
Student Media	MCENT 2	480/965-7572	www.asu.edu/studentmed a
State Press Advert s ng		480 965 6555	
State Press Informat on		480 965 7572	
State Press Newsroom	---	480 965-2292	www.asuwebdevil.com
Web Devil		480/727 6941	
Student Organizat on Resource Center	MU 40	480 965 2255	www.asu.edu/cubs
Student Recreat on Comp ex and Recreational Sports	SRC 220	480 965 8900	www.asu.edu/src
Summer Sess ons Office of Summer Internat ona Programs	ADM B167 AG 313	480 965 6611 48 965 6611	www.asu.edu/ssc www.asu.edu/ssc/StudyAbroad
Sun Dev nvo vement Center	MU 3rd level	480 965 2255	www.asu.edu/mu/sdic.html
SunD a		480 350 1500	www.asu.edu/registrar/regstrat on/ntouch.html
Test ng Support Serv ces	SSV 382	480/965 6777	www.asu.edu/vpsa/tss
T ckets			
Ath et c Events, nterco eg ate Sun Dev T cket Off ce		480 965 2381	
Pub c Events Adm n st at ve Off ces		480 965 5062	
Pub c Events Box Off ce	GGMA	480 965 3434	
Transcr pts (Outgo ng)	SSV 140B	480 965 7276	www.asu.edu/registrar/transcripts
Transportat on Systems Cert ficate	ARCH 119	480 965 6395	eastar.east.asu.edu/transportat on
Tuition Payment Off ce	SSV 235	480 965 4347	
Undergraduate Academ c Serv ces, D vs on of	UASB	480 965 3097	www.asu.edu/duas
Academ c Adv s ng Serv ces	UASB 129	480 965 4464	www.asu.edu/duas/cas

See "ASU East Directory," page 655.

<sup>2</sup> See "ASU Extended Campus Directory," page 13.

<sup>3</sup> See "ASU Web Directory," page 694.

## ASU MAIN DIRECTORY

Organization	Location	Telephone	Web Address
Undergraduate Academic Services, Division of continued			
Academic Success at the University UNI 100 and 101 Student Success Center	ED 410	480 965 3097	www.asu.edu/duas/un100
Bachelor of Interdisciplinary Studies B.I.S.	UASB 200	480 965 1970	www.asu.edu/duas/bis
Campus Match	ED 410	480 965 3097	www.asu.edu/duas/campmat
Declaration of Graduation			www.asu.edu/duas/dog
Degree Audit Reporting System DARS	UASB 100	480 965 0859	www.asu.edu/duas/dars
General Studies Program	UASB 230	480 965 0739	www.asu.edu/duas/genstudies
Service Learning	UASB 200	480/727 6657	www.asu.edu/duas/servicelearn
Summer Bridge	ED 410	480 965 3097	www.asu.edu/duas/bridge
Supplemental Instruction	ED 410	480 965 3097	www.asu.edu/duas/si
Writing Across the Curriculum Support and Development	ED 410	480 965 3097	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	LIB	480 965 6164	www.asu.edu/libraries
Architecture and Environmental Design Library	AED 153	480 965 6400	www.asu.edu/caed/AEDlibrary
Archives and Manuscripts Department of Hayden Library Circulation Desk	LB 413	480 965 3145	www.asu.edu/lib/archives
Library Administration	LB	480 965 3605	www.asu.edu/lib/hayden
Library Administration	LB	480 965 3417	
Music Library	MUS C W302	480 965 3513	www.asu.edu/lib/music
Noble Science and Engineering Library	NOBLE	480 965 2600	www.asu.edu/lib/noble
Reference Questions		480 965 4932	www.asu.edu/lib/haydenref
Video Resources	ECA 100	480 965 5046	www.asu.edu/lib/video
West Campus Library	FLHLB	602 543 5717	www.west.asu.edu/library
University Testing Services	EDB 301	480 965 7146	www.asu.edu/uts
Upward Bound	SSV 276	480 965 6483	www.asu.edu/student/feub/main.htm
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/student/fevub
Winter Session		480 965 9797	www.asu.edu/xed/wintrssn.html

<sup>1</sup> See "ASU East Directory," page C33

<sup>2</sup> See "ASU Extended Campus Directory," page 713

<sup>3</sup> See "ASU West Directory," page 694

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## Regents' Professors

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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**

*Biology*

**DAVID L. ALTHEIDE**

*Instructional Studies*

**C. AUSTEN ANGELL**

*Christianity and Bible Interpretation*

**CONSTANTINE A. BALANIS**

*Electrical Engineering*

**DAVID C. BERLINER**

*Education, Leadership and Psychology Studies  
in Psychology and Education*

**PETER R. BUSECK**

*Chemistry and Biochemistry and Geological Science*

**ROBERT B. CIALDINI**

*Psychology*

**GEOFFREY CLARK**

*Anthropology*

**JEFFREY COOK**

*Architecture*

**JOHN M. COWLEY**

*Physics and Atmospheric Sciences*

**NORMAN DUBIE**

*English*

**NANCY H. EISENBERG**

*Psychology*

**LEROY EYRING**

*Chemistry and Biochemistry Education*

**DAVID K. FERRY**

*Electrical Engineering*

**DAVID WILLIAM FOSTER**

*Spanish*

**RONALD GREELEY**

*Geographical Sciences*

**GERALD THOMAS HEYDT**

*Electrical Engineering*

**DAVID R. HICKMAN**

*Music*

**PETER IVERSON**

*History*

**DAVID H. KAYE**

*Literature*

**GARY D. KELLER**

*Spanish*

**MARK KLETT**

*Art*

**RAYMOND W. KULHAVY**

*Psychology and Education*

**DANIEL M. LANDERS**

*Exercise Science and Physical Education*

**SHENG H. LIN**

*Chemistry and Biochemistry Education*

**JANE MAIFNSCHEIN**

*Bioguided Therapy*

**JAMES W. MAYER**

*Chemical Materials Engineering*

**LEF MEYERSON**

*Psychology Lectures*

**CARLETON B. MOORE**

*Chemistry and Biomaterials Engineering and Sciences*

**JEFFREY G. MURPHY**

*Laboratory*

**MICHAEL O'KEEFFE**

*Chemistry and Biochemistry*

**CAIO PAGANO**

*Music*

**DENNIS J. PALUMBO**

*Instructional Studies Education*

**GEORGE R. PETTIT**

*Chemistry and Biochemistry*

**ALBERTO ALVARO RIOS**

*English*

**NANCY FEIPF RUSSO**

*Psychology*

**DAVID J. SMITH**

*Physics and Astronomy and Interdisciplinary State Science*

**JOHN C.H. SPENCE**

*Physics and Astronomy*

**SUMNER STARRFIELD**

*Physics and Astronomy*

**MARY BETH STEARNS**

*Physics and Astronomy Education*

**WILLIAM I. TROTTER**

*Mathematics*

**CHRISTY G. TURNER II**

*Anthropology*

**J. BRUCE WAGNER JR.**

*Interdisciplinary Leadership and Interdisciplinary State Science Education*

**KURT WEISFR**

*Art*

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# ASU Main Faculty and Academic Professionals

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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

**Aanenson, Todd** (2000). Faculty Associate of Construction; B.S., Arizona State University

**Aannestad, Per** (1975). Associate Professor of Physics and Astronomy; B.S., University of Oslo (Norway); Ph.D., University of California, Berkeley

**Abbaszadegan, Morteza** (1999). Associate Professor of Civil and Environmental Engineering and Adjunct Faculty of Microbiology; 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). 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

**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). Associate Professor 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; Interim 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). Faculty Associate 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., D.P.A., Arizona State University

**Afflitto, Frank M.** (2001). Assistant Professor of Justice Studies; B.A., University of Massachusetts, Boston; M.A., Ph.D., University of California, Irvine

**Agadjanian, Victor** (1995). Assistant 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 (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 (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 Biology; 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, 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). Associate 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; Associate Dean, Academic Programs, 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; 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 Biology; 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, Manufacturing Institute; B.S., San Diego State University

**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). Associate Research Scientist; 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 and Special Programs; 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; B.A., San Francisco State University; M.A., California State University, Northridge; Ed.D., University of Massachusetts, Amherst

**Aranda, Luis** (1975). Associate Professor of Legal and Ethical Studies; B.M., M.Ed., University of Arizona; J.D., 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, Sam** (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). Faculty Associate 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 Philosophy; Chair, Department of Philosophy; B.A., Rice University; Ph.D., University of Illinois, Chicago

**Armstrong, Robert L.** (1967). Professor Emeritus of Curriculum and Instruction; B.A., State Teachers College of Iowa; M.S., University of Iowa; Ed.D., University of Arizona

**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

**Arntzen, Charles J.** (2000). Florence Ely Nelson Presidential Chair, Plant Biology; B.S., M.S., University of Minnesota; Ph.D., Purdue University

**Aronson, Jerome M.** (1966). Professor Emeritus of Plant Biology; B.A., Ph.D., University of California, Berkeley

**Arredondo, Patricia** (1999). Associate Professor of Psychology in Education; B.S., Kent State University; Ed.M., Boston College; Ed.D., Boston University

## ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

**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 of Law; B.A., Elmira College; J.D., University of Iowa

**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

**Ashcroft, Edward A.** (1988). Professor of Computer Science and Engineering; B.A., Cantab (United Kingdom); Ph.D., Imperial College of London (United Kingdom)

**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). Professor of Management; 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

**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). Lecturer, Division of Undergraduate Academic Services; B.A., New York University; M.A., Ph.D., Emory University

**Aulerich, Christopher E.** (1989). Faculty Associate, Del E. Webb School of Construction

**Autore, Donald D.** (1959). Professor Emeritus of Technology; B.S.E., University of Michigan; M.S.E., Arizona State University

**Axelrod, Morris** (1972). Professor Emeritus of Sociology; B.A., Ph.D., University of Michigan

**Axford, Roger W.** (1975). Professor Emeritus of Curriculum and Instruction; B.A., Nebraska Wesleyan University; M.A., Ph.D., University of Chicago

**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

**Backhaus, Ralph A.** (1977). Professor of Plant Biology; B.S., Rutgers, The State University of New Jersey; M.S., Ph.D., University of California, Davis

**Backus, Charles E.** (1968). Professor of Electrical Engineering; Campus Chief Executive Officer and 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 (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 of Anthropology; A.B., M.A., Ph.D., Harvard University

**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). Assistant Professor of Interdisciplinary Humanities; B.A., Hobart College; M.A., Ph.D., Indiana University

**Baker, Brenda J.** (1998). Assistant 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 Faculty of Plant Biology; 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



**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** (1983). Professor of Chemistry and Biochemistry; 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

**Ball, Terence** (1998). Professor of Political Science; B.A., University of California, Santa Cruz; M.A., Ph.D., University of California, Berkeley

**Ballentine, James Terry** (2000). Faculty Associate of Nursing; B.S., M.S., Arizona State University

**Balling, Robert C.** (1987). Professor of Geography; Director, Climatology Laboratory; A.B., Wittenberg University; M.A., Bowling Green State University; Ph.D., University of Oklahoma

## ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- 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 Etudes Iberiques University of Paris III France
- Baral, Chitta** 1999, Associate Professor of Computer Science and Engineering; B.Tech., Indian Institute of Technology (India); M.S., Ph.D., University of Maryland, College Park
- Barcelo, Helene** 1990, Associate Professor of Mathematics and Statistics; M.S.C., University of Quebec Canada; Ph.D., University of California, San Diego
- Bardewick, Loretta A.** 1975, 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
- Bardsley, Doreen** 1971, Lecturer of Curriculum and Instruction; B.A., M.Ed., University of Regina, Canada; Ph.D., Arizona State University
- Barker, David** 1953, Professor of Theatre; B.S.E., Duquesne University; M.F.A. Writers The State University of New Jersey
- Barkley, Margaret V.** 1963, Professor Family and Human Development; B.S. Michigan University; M.S. Ed.D. University of Illinois
- Barkson, Joseph A.** 1958, Professor Emeritus of Etymology; 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, Associate Learning Resources Specialist, Library Instruction, System, and Technology; 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, Andres** 1986, Professor of Psychology in Education; B.S., M.Ed., Texas A&M University; Ph.D., University of Texas Austin
- Barone, Thomas** 1991, Professor of Curriculum and Instruction and Educational Leadership and Policy Studies; B.A., Loyola University New Orleans; M.A., University of New Orleans; Ed.D., Stanford University
- Barrera, Manuel** 1971, 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** 1981, Professor Emerita of Music; B.M., University of Texas; D.M.A., University of Maryland College Park
- Bartels, Robert D.** 1981, Professor of Law; B.A., University of Michigan; J.D., Stanford University
- Bartlett, Mark** 2001, 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
- Barton, C. Michael** 1957, 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 General Business; 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** 1970, Lecturer of Chemistry and Biochemistry; B.S., Sam Houston State University; M.S., Ph.D., Purdue University
- Baxter, Harry R.** 1957, Professor Emeritus of Engineering; B.A., New York University; M.B.A., Fairleigh Dickinson University; M.Tech., Arizona State University
- Bazzi, Rida** 1996, Assistant Professor of Computer Science and Information Engineering; B.E., American University of Beirut, Lebanon; M.S., Ph.D., Georgia Institute of Technology
- 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
- Beattie, Donald** 1971, Assistant Professor of Military Science; B.S., Buffalo State College; M.A.E., University of Colorado, Boulder
- Beaudoin, Stephen P.** 1995, Associate Professor of Chemical Engineering; B.S., Massachusetts Institute of Technology; M.S., University of Texas Austin; Ph.D., North Carolina State University
- Beck, Lasca** 1984, Clinical Associate Professor 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 Chemical Engineering; B.S., M.S., University of Wisconsin; Ph.D., University of Arizona
- Bedard, Roger L.** 1991, 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., Abilene 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
- Beggs, Donald** 1999, Lecturer of the Barrett Honors College; Faculty Chair, Barrett Honors College; A.B., University of California, Berkeley; Ph.D., University of California, Santa Cruz

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**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

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**Benavides, Alfredo H.** (1988). Associate Professor of Curriculum and Instruction; B.A., Texas A&I University; M.A., Ph.D., Michigan State University

**Bender, Bert A.** (1971). Professor of English; B.A., University of Washington; Ph.D., University of California, Irvine

**Bender, Gordon L.** (1953). Professor Emeritus of Biology; 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

**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

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**Berman, David R.** (1966). Professor 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

**Bernard, Stephen Z.** (1994). Faculty Associate of Construction; B.S., Arizona State University

**Bernardi, Jose** (1995). Associate Professor of Design; B.Arch., National University of Cordoba; M.S., University of Cincinnati

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**Bertelsen, Wendle R.** (1964). Professor Emeritus of Architecture; B.Arch., University of Michigan; M.Arch., University of Arizona

**Bess, Vicki** (1994). Adjunct Faculty of Microbiology; M.S., Arizona State University

**Betz, M. Austin** (1974). Professor Emeritus of Civil 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

**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). Associate Research Scientist of Plant Biology; 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). Associate Professor of Microbiology; Chair, Department of Microbiology; Codirector, Molecular Biosciences and Biotechnology Program; B.A., Ph.D., University of Wisconsin, Madison

**Birk, James P.** (1973). Professor of Chemistry and Biochemistry; B.A., Saint John's University; Ph.D., Iowa State University

**Birtcher, Craig R.** (1987). Assistant Research Specialist, Electrical Engineering; B.S.E., M.S., Arizona State University

**Bitner, Mary Jo** (1987). AFT Professor of Marketing; 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 of Academic Programs, College of Liberal Arts and Sciences; B.A., University of Connecticut; M.A., Northeastern University; Ph.D., Brown University

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- Bjork, Robert F.** 1953, 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.** 1967, Professor Emeritus of Counselor of Education, B.S., M.S., Utah State University, Ph.D., Cornell University
- Blackledge, Vernon O.** 1967, Professor Emeritus of Computer Science in Engineering, B.S.E.E., University of Illinois, M.S.E.E., University of Santa Clara, Ph.D., Arizona State University
- Blacklock, Cathy B.** 2000, Assistant Professor of Aerospace Studies, B.S., William Wood University; M.S., Lesley College
- Blackman, William C.** 1958, Research Professor 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., DePaul University, Ph.D., University of Massachusetts
- Blair, Sampson Lee** 1995, Associate Professor of Sociology, B.S., M.S., Virginia Polytechnic Institute, Ph.D., Pennsylvania State University
- 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, M.S.T., Drake University, Ph.D., University of Georgia
- Blankenship, Robert F.** 1985, Professor 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.** 1981, Associate Professor of Marketing, B.S., M.B.A., Arizona State University, Ph.D., University of Texas, Austin
- Bloom, Irene** 1997, Lecturer of Mathematics and Statistics, B.A., M.S., University of Miami
- Blouin, Deborah K.** 1977, Associate Librarian, Hayden Reference Services, B.A., Central Connecticut State University at New York, Albany
- Blount, Douglas J.** 1980, 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, Peat Marwick Professor of Accountancy, B.S., M.S., Oklahoma State University, Ph.D., University of Texas, Austin
- Boatsman, Joyce I.** 1996, Lecturer of Accountancy and Information Management, B.S., Oklahoma State University, M.Tax., Arizona State University
- Bodell, Leonard S.** 1997, Adjunct Professor of Anthropology, B.A., Hobart and William Smith Colleges; M.D., New York Upstate Medical Center
- Bodman, Denise** 1996, Lecturer of Family and Human Development, B.S., M.S., Arizona State University
- Bogardus, Clifton** 1992, Adjunct Professor of Biology, 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 General Business, B.S., M.S., Ph.D., Ohio State University
- Bohlander, George W.** 1977, Professor 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 Legal and Ethical Studies, B.A., B.S., Drake University; M.B.A., J.D., Indiana University
- Bolin, Robert** 1990, Professor of Sociology, B.A., Ph.D., University of Colorado
- Boiton, Cynthia J.** 1997, 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
- Booksh, Karl S.** 1996, Assistant 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, Collection Development; M.L.S., Ph.D., Charles University, Prague, Czechoslovakia
- Borrer, Connie M.** 2000, Lecturer of Industrial Engineering, B.S., M.S., Southern Illinois University, Edwardsville, Ph.D., Arizona State University
- 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 and Tourism, B.A., Washington State 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 Family and Human Development, Director, 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

## ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- Boyd, James H.** 1976 . Professor Emeritus of Accountancy and Information Management. B.B.A. Texas Christian University; M.S. Northeastern University; Ph.D., University of Texas, Austin; CPA Texas
- Boyer, Don L.** 1988 . Professor of Mechanical and Aerospace Engineering; B.S., Rensselaer Polytechnic Institute; Ph.D., Johns Hopkins University
- Boyer, Jay M.** 1966 . 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
- 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. 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** 1966 . 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 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 . Associate Librarian, 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** 1954 . 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
- Brenstuhel, Daniel C.** 1975 . Associate Professor 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 Director, 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 Plant Biology; B.S., M.S., 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 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
- Brookey, Robert Alan** 2002 . Assistant Professor of Communication; B.A., M.A. University of Arkansas; Ph.D., University of Minnesota
- 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 Academic 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
- 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.** 1977 . Associate Professor of Public Affairs; B.A., Brigham Young University; M.A., Arizona State University; Ph.D., University of Illinois
- Brown, Claudia** 1998 . Assistant Professor of Art; B.A., M.A., M.Phil., Ph.D., University of Kansas
- Brown, David E.** 1993 . Adjunct Professor of Biology; B.A., San Jose State College
- Brown, Duane** 1970 . 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

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**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 Biology; A.B., California State University; Ph.D., University of Kansas

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**Brzuzy, 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

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**Burdick, Richard K.** (1976). Professor of Statistics; 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

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**Burke, William F. Jr.** (1977). Professor of Microbiology; B.A., University of Dallas; M.S., North Texas State University; Ph.D., Arizona State University

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**Burstein, David** (1982). Professor of Physics and Astronomy; B.A., Wesleyan University; Ph.D., University of California, Santa Cruz

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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

**Bustoz, Joaquín** (1975). Professor of Mathematics and Statistics; Director, SUMS Institute; B.A., M.A., Ph.D., Arizona State University

**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

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## C

**Cabianca, William A.** (1967). Professor Emeritus of Counselor Education; B.Ed., Gonzaga University; M.Ed., Ph.D., Washington State University

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- Cafarella, Robert J.** 1991, Faculty Associate of Planning and Landscape Architecture; B.S., Northeastern University, M.U.P. New York University
- Caicco, Gregory** 2000, Assistant Professor of Architecture; B.Arch., Carleton University, Canada, M.Phil., University of Cambridge, United Kingdom; Ph.D., McGill University (Canada)
- 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.** 1981, Associate Professor of 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; 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, Gary L.** 1997, 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
- Campos-Outcalt, Douglas** 1998, Adjunct Professor of Anthropology; B.S., M.P.A., Arizona State University, M.D., University of Arizona
- Canary, Daniel J.** 1999, Professor of Communication; B.A., California State University, Fullerton; M.A., California State University, Fullerton, M.A., Ph.D., University of Southern California
- Candan, Kasim Selcuk** (1997, Assistant 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, Frederic** 1999, Assistant Professor of French; Diplôme d'Études Universitaires Générales de Lettres Modernes; Maître de Lettres Modernes; D.P.O.M.E. d'Études Approfondies de Lettres Modernes; Lyon University, France; Ph.D., University of Oregon
- Canright, James E.** 1964, Professor Emeritus of Plant Biology; B.A., Miami University, A.M., Ph.D., Harvard University
- Capco, David G.** 1984, Professor of Biology; B.S., Edinboro State College; M.S., University of Houston; Ph.D., University of Texas, Austin
- Cardy, Robert L.** 1988, Professor of Management; B.S., Central Michigan University; Ph.D., Virginia Polytechnic Institute and State University
- Carlsen, Paul A.** 1988, Professor Emeritus of Technology; B.A.E., M.N.S., Ed.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, Holderlin School, Germany; Vorsemesterstudium und Ph.D., University of Heidelberg, Germany; Dr. phil., University of Erlangen-Nuremberg, Germany
- Carlson, Marilyn P.** 1995, Associate Professor of Mathematics and Statistics; B.S., Central Missouri State University; M.S., Ph.D., University of Kansas
- Carlson, Ron** 1986, Professor of English; B.A., M.A., University of Utah
- Carlyle, Matthew W.** 1997, Assistant Professor of Industrial Engineering; B.S., Georgia Institute of Technology; Ph.D., Stanford University
- Carney, James D.** 1961, Professor Emeritus of Philosophy; B.A., equivalent, Northern Baptist Theological Seminary; M.A., Roosevelt University; Ph.D., University of Nebraska, Lincoln
- Carpenter, Eilon 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, Center for Solid State Science; B.S., M.S., Ph.D., University of California, Berkeley
- Carpio, Myla Vicenti** 1967, Assistant Professor of American Indian Studies; B.A.E., University of New Mexico; M.A., Arizona State University
- Carr, Christopher** 1985, Professor of Anthropology; B.A., University of Illinois; M.A., Ph.D., University of Michigan
- Carrington, Jane M.** 1995, Faculty Associate of Nursing; B.S.N., Arizona State University; M.S.N., University of Pennsylvania
- Carroll, Kevin K.** 1975, Associate Professor of History; B.A., Canisius College; M.A., Ph.D., Harvard University
- Carroll, Steven** 1985, Professor Emeritus of Biology; B.S., Tuamatacuni University; M.S., Oregon State University; Ph.D., University of Oregon
- Carter, Joseph R.** 1991, Adjunct 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
- 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
- Casey, Kathleen Marie** 2000, Faculty Associate of Nursing; B.S., University of Wisconsin; M.S., Arizona State University
- Cashman, Holly** 2001, Assistant Professor of Spanish; B.A., Hood College; M.A., Ph.D., University of Michigan, Ann Arbor
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- 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
- Cavaliere, William A.** 1946 Professor Emeritus of Technology; B.A., M.A., Arizona State University
- Cavanaugh, Carolyn J.** 1996 Academic Associate of Psychology; A.B., Duke University; Ph.D., Arizona State University
- Cavanaugh, Ellen May** 1995 Faculty Associate of Nursing; B.S.N., University of Phoenix; M.S., University of Arizona
- 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 Knoxville
- Cavinato, Joseph L.** 2001 Adjunct Professor of Supply Chain Management; B.S., B.A., M.B.A., American University; Ph.D., Pennsylvania State University
- 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.** 1997 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 A.** 1997 Assistant 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** 1995 Professor of Japanese; B.A., Pomona College; M.A., Stanford University; Ph.D., University of Michigan
- Chance, John K.** (1987) Professor of Anthropology; Chair, Department 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.** 1981 Professor of Biology; B.S., University of Rochester, M.A., Johns Hopkins University; Ph.D., University of California, San Francisco
- Chang, Yung** 1996 Assistant Professor of Microbiology; M.D., Beijing Medical College (China); Ph.D., University of Iowa
- Chaparian, Michael G.** 2000 Adjunct Professor of Plant Biology; B.S., Michigan Technological University; Ph.D., Wayne State University
- Chapman, Jeffrey** 1991 Professor of Public Affairs; Director, School of Public Affairs; A.B., Occidental College; M.A., Ph.D., University of California, Berkeley
- Chapsky, Lars** 1998 Assistant Professor of Engineering; B.A., Ph.D., University of California, Berkeley
- Chapuis, Jean-Charles** 1991 Associate 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
- 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** 1996 Professor of Mechanical and Aerospace Engineering; M.S., Ph.D., Georgia Institute of Technology
- Chaudhuri, Joyotpal** 1985 Professor of Political Science; B.A., Central State University, Oklahoma; M.A., Ph.D., University of Oklahoma
- Chawla, Nikhilesh** 2000 Assistant 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, Stanley S.** 1961 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
- Chenoweth, Timothy** 1996 Assistant Professor of Computer Information Systems; B.S., U.S. Coast Guard Academy; M.B.A., Ph.D., Washington State University
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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

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**Clark, William Dennis** (1976), Associate Professor of Plant Biology; B.A., Sacramento State College; Ph.D., University of Texas, Austin

**Clay, J. Eugene** (1993), Associate Professor of Religious Studies; A.B., A.M., Ph.D., University of Chicago

**Clelow, Paul J.** (1988), Faculty Research Associate, Cancer Research Institute; B.S., University of Leicester (United Kingdom); Ph.D., University College (United Kingdom)

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**Clothier, Ronald R.** (1955), Professor Emeritus of Biology; 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

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**Cocke, Robert D.** (1983), Professor 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.F.A., University of Michigan; M.F.A., Ph.D., Indiana University

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**Cogley, Timothy** (1999), Associate Professor of Economics; A.B., Ph.D., University of California, Berkeley

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**Cole, V. Scott** (1995). Faculty Associate of Construction; B.S., Arizona State University; M.S., Central Michigan University

**Coles, Jeffrey L.** (1994). Professor of Finance; B.A. Pomona College; Ph.D., Stanford University

**Colina, Sonia** (1997). Assistant 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). Professor of Biology; Chair, Department of Biology; B.S., Manhattan College; M.S., Ph.D., University of Michigan

**Collofello, James S.** (1979). Professor 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 and Information Management; B.S., Ohio State University; Ph.D., University of Illinois, Urbana-Champaign

**Congdon, Justin D.** (2000). Adjunct Professor of Biology; B.S., M.S., California State Polytechnic University; Ph.D., Arizona State University

**Conrad, Cheryl D.** (1997). Assistant Professor of Psychology; B.S., University of California, Irvine; Ph.D., University of Illinois, Urbana-Champaign

**Conrow, Jane A.** (1968). Associate Dean, 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



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(1961)  
Regents' Professor of Architecture; B.Arch., University of Manitoba (Canada); M.Arch., Pratt Institute

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**Cook, Suzanne M.** (1974). Associate Professor of Management; B.B.A., M.B.A., D.B.A., Texas Tech University

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**Coor, Lattie F.** (1990). Professor of Public Affairs; President of the University; A.B., Northern Arizona University; M.A., Ph.D., Washington University

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**Corey, Constance H.** (1973). Librarian Emerita; B.A., Denison University; M.L.S., University of Arizona; M.B.A., Arizona State University

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**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). Associate Professor of Spanish; B.A., California State University, Turlock; M.A., University of California, Davis; Ph.D., University of Arizona

**Couch, Sanford C.** (1962). Professor 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 of Social Work; B.A., College of Saint Benedict; M.S.W., University of Minnesota, Twin Cities; D.S.W., Columbia University

**Coursen, Jerry** (1987). Adjunct Associate Professor 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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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 and Military Science; B.S., Fayetteville University; M.S., University of North Carolina; Ph.D., University of Tennessee

**Craft, Elizabeth H.** (1982). Administrative Professional, College of Extended Education; Director, Distance Learning and Technology, College of Extended Education; B.F.A., Ohio University; M.A., Arizona State University

**Craft, John E.** (1973). Professor of Journalism and Mass Communication; B.F.A., M.A., Ph.D., Ohio University

## ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

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**Crewe, Katherine** 1985, 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, W. Jackson** 1988, Associate Professor of Political Science, B.A., Tufts University; M.Ed., Harvard University; D.Phil., University of Oxford; United Kingdom

**Croft, Lee B.** 1973, Professor of Russian, B.S., Arizona State University; M.A., University of Arizona; Ph.D., Cornell University

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**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.** 1987, Professor of Electrical Engineering; Dean College of Engineering and Applied Sciences; B.S., M.S., University of Warwick; United Kingdom; Ph.D., Harvard University

**Crowder, Troy F.** 1971, 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

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## D

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**Daley, J. Michael** 1978, Professor of Social Work, B.S., Spring Hill College; M.S.W., Saint Louis University; M.S., University of Pittsburgh; Ph.D., Tulane University

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**Damrel, David W.** 2000, Assistant Professor of Religious Studies; B.A., B.J.M.A., University of Texas, Austin; Ph.D., Duke University

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**Darst, Paul W.** 1976, Professor of Exercise Science and Physical Education; 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

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**Dauten, Joel J.** 1960, Professor Emeritus of Finance, B.S., M.S., Washington University; Ph.D., University of Iowa

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- Davidson, Elizabeth T.** 1986, Research Professor of Biology, 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** 1995, Lecturer of Management; B.S., University of Illinois, Urbana-Champaign; M.B.A., Arizona State University
- Davis, Frank S.** 1978, Senior Research Professor of Chemistry and Biochemistry; B.S.E., Arizona State University
- Davis, George R.** 1980, Professor Emeritus of Electrical Engineering, B.S.E.E., M.S., University of Illinois, Ph.D. University of Arizona
- 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, Keith** 1958, Professor Emeritus of Management, B.B.A. M.B.A. University of Texas, Ph.D., Ohio State University
- Davis, Kirsten** 2001, Lecturing Instructor, B.A., J.D., Ohio State University
- Davis, Mary C.** 1974, Associate Professor of Psychology, B.S., University of Idaho, M.S., Ph.D., University of Pittsburgh
- Davis, Olga Idriss** (1998), Assistant Professor of Communication, B.S., University of Redlands, M.A., Ph.D., University of Nebraska Lincoln
- Davis, Robert E.** 1959, Professor Emeritus of Communication, B.A., M.A., Ph.D., University of Illinois
- Davis, Thomas J.** 1996, Professor of History, A.B., Fordham University, M.A., Ph.D., Columbia University, J.D., State University of New York, Buffalo
- Day, Thomas** 1995, Associate Professor of Plant Biology, B.S., Colorado State University, M.S., University of Idaho, Ph.D. Colorado State University
- de Jesus, Melinda L.** 1999, Assistant Professor of Asian Pacific American Studies, B.A., Lehigh University, M.A., University of York (United Kingdom), Ph.D., University of California, Santa Cruz
- de los Santos, Alfredo** 1999, Research Professor, Division of Educational Leadership and Policy Studies, B.A., M.L.S., Ph.D. University of Texas, Austin
- de Marneffe, Peter** 1989, Associate Professor of Philosophy, B.A., University of Massachusetts, Amherst, Ph.D., Harvard University
- Deach, Dorothy F.** 1967, Professor Emerita of Physical Education, B.S., M.S., University of Illinois, Ph.D., University of Michigan
- Deal, Clarice** (1996), Instructor of Portuguese, B.A., Organização Santa Marensense de Educação e Cultura, Sao 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
- Debenport, Sylvia** 1988, Professor Emerita of Music, B.M.E. B.M., M.M., Indiana University, Bloomington
- DeFato, Rosalinda** (1970), Librarian, Team Leader, Hayden Reference Services, B.A., Saint John's University, M.L.S., University of California, Los Angeles
- DeGraftenreid, Don** (1991), Senior Research Administrator, Center for Advanced Research in Transportation, Manager, Technical Transportation Program, B.S.C.E., New Mexico State University
- DeGraw, Bette F.** 1986, Administrative Professor, College of Extended Education, Assistant Professor of Public Affairs; Dean, College of Extended Education, Director, Downtown Center; B.A., Title College; M.S.W., Rutgers, The State University of New Jersey; D.P.A., Arizona State University
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- Deli, Daniel N.** 2001, Assistant Professor of Finance, B.A. University of Illinois; M.S., University of Illinois, Ph.D., Arizona State University
- DeLibero, Joseph** (1996), Lecturer of Computer Science and Engineering, B.S., Iowa College; M.S., Purdue University
- DeLorenzo, Lisa C.** 1998, Assistant Professor of Public Affairs, B.A., M.A., U.A., Saint Louis University, M.A., M.P.P.A., Ph.D., University of Missouri, St. Louis
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- DeMassa, Thomas A.** 1966, Professor Emeritus of Electrical Engineering, B.S.E.E., M.S.E.E., Ph.D., University of Michigan
- Demeke, Howard J.** (1962), Professor Emeritus of Education, A.B., San Francisco State College, M.S., Ed.D., University of Southern California
- DeNardo, Dale** 1998, Assistant Professor of Biology; B.S., D.V.M., University of California, Davis; Ph.D., University of California, Berkeley
- Denhardt, Janet Vinzant** 1995, Professor of Public Affairs, B.A., Washington State University, M.P.A., D.P.A., University of Southern California
- Denhardt, Robert** 1999, Professor of Public Affairs, B.A., Western Kentucky University, M.A., Ph.D., University of Kentucky
- DeSerpa, Allan C.** 1975, Professor of Economics, B.A., University of Santa Clara, Ph.D., University of California, Santa Barbara
- Detrie, Thomas** 1954, Professor Emeritus of Design, B.F.A., M.F.A., Louisiana Tech University
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- Devlin, John** 1998, Assistant Professor of Philosophy, B.A., University of Toronto, Canada, Ph.D., University of Michigan
- Dey, Sandwip** 1987, Professor of Materials Engineering, B.Tech., Banares Hindu University, India, M.S., Ph.D., Alfred University
- Dezelsky, Thomas L.** 1968, Professor Emeritus of Exercise Science and Physical Education, B.S., Central Michigan University, M.A., University of Michigan, H.S.D., Indiana University, Bloomington
- Di Gangi, Samuel** (1991), Associate Professor of Curriculum and Instruction, B.A., University of Pittsburgh, M.Ed., Ph.D., Arizona State University
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**Doig, Stephen** (1996), Professor of Journalism and Mass Communication; B.A., Dartmouth

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## E

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**El-Sharawy, El-Badawy** (1989). Associate Professor of Electrical Engineering; B.S.E., M.S.E., Mansoura University (Egypt); Ph.D., University of Massachusetts, Amherst

**Ellin, Nan** (1998). Associate Professor of Architecture; B.A., Bryn Mawr College; M.A., Ph.D., Columbia University

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**Etter, Patricia A.** (1988). Archivist, Archives and Manuscripts; B.A., California State University, Long Beach; M.L.S., University of Arizona

**Evancho, Dustin** (1999). Assistant Professor of Aerospace Studies; B.S., University of Arizona

**Evans, Donovan L.** (1966). Professor of Engineering; Director, Center for Research on Education in Science, Mathematics and Statistics, Engineering, and Technology; B.S.M.E., University of Cincinnati; Ph.D., Northwestern University

**Evans, John X.** (1964). Professor Emeritus of English; B.A., Holy Cross College; M.A., Ph.D., Yale University

**Eveland, Charles** (1974). Professor Emeritus of Health Administration and Policy; B.S., University of Maryland; M.S., Baylor University; Ph.D., University of Michigan

**Ewan, Joseph** (1994). Assistant Professor of Planning and Landscape Architecture; B.S.D., Arizona State University; M.L.A., University of California, Berkeley

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## F

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**Fabricius, William** (1990). Associate Professor of Psychology; B.A., Boston College; M.S., Wheelock College; Ph.D., University of Michigan

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**Fausel, Donald F.** (1969). Professor Emeritus of Social Work; A.B., S.T.B., S.T.L., Saint Mary's University; M.S.W., Fordham University; D.S.W., Columbia University

**Fearon, Harold E.** (1961). Professor Emeritus of Purchasing Management; National Association of Purchasing Management Professor; B.S., M.B.A., Indiana University; Ph.D., Michigan State University

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- Fox, Peter** 2001, 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
- Francis, Karl E.** 1993, Adjunct Professor of Geography, B.S. Pennsylvania State University, M.S., Oregon State University, Ph.D., University of Wisconsin, Madison
- Francisco, Wilson A.** 1999, Assistant Professor of Chemistry and Biochemistry, B.S. University of Puerto Rico, Puerto Rico, Ph.D. Texas A&M University
- Frasch, Wayne D.** 1989, Professor of Plant Biology, B.A., Hope College, Ph.D., University of Kentucky
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- Freeman, Donald J.** 1989, Professor Emeritus of Education, B.A., Grinnell College, M.A., Ph.D., Michigan 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.** 1977, Professor Emeritus of Mathematics and Statistics, B.A., M.A. University of California, Los Angeles, Ph.D., University of Pittsburgh
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## G

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- Griffiths Nagy, Sandra I.** 1957, Academic Associate, Division of Undergraduate Academic Services, Assistant Director, Writing Across the Curriculum Program, B.Ed., M.A., Ph.D., Arizona State University
- Grigsby, J. Eugene** 1966, Professor Emeritus of Art, B.A., Morehouse College, M.A., Ohio State University, Ph.D., New York University
- Grimm, Nancy B.** 1990, Professor of Biology, B.A., Hampshire College; M.S., Ph.D., Arizona State University
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- 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, College of Engineering and Applied Sciences, 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
- Groy, Thomas L.** 1983, Associate Research Professor of Chemistry and Biochemistry, B.S., Adams State College, Ph.D., Arizona State University
- Gruzinska, Aleksandra** 1975, Assistant Professor of French, B.A., M.A., State University of New York, Buffalo, Ph.D., Pennsylvania State University
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- Guerin, Sanford M.** 1984, Professor of Law, B.S., Boston University, J.D., University of San Francisco, LL.M., New York University
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- Guinouard, Donald E.** 1966, Professor Emeritus of Counselor Education, B.S., M.S., Montana State College, Ed.D., Washington State University
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## H

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- Hackett, Gail** 1988, Professor of Counseling Psychology and Counselor Education, Vice Provost for Academic Personnel, B.A., M.Ed., Ph.D., Pennsylvania State University
- Hadley, Neil F.** 1966, Professor Emeritus of Biology, 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
- Haussler, 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., Carmichael Graduate School
- Hagler, Debra** 1996, Clinical Associate Professor of Nursing, B.S.N., New Mexico State University, M.S., University of Arizona

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- Hahn, Arthur W.** 1962, Professor Emeritus of Art, B.F.A., San Francisco Art Institute, M.A., California State University, San Francisco
- Hahn, Thomas** 1955, Assistant Professor of Architecture, B.A. University of Wisconsin, M.Arch., Arizona State University
- Hajjcek, James** 1976, Professor of Art, B.F.A., Kansas City Art Institute, M.F.A., University of New Mexico
- Hakac, John** 1960, Professor Emeritus of English, A.B., Central College, M.A., Ph.D., University of Texas, Austin
- Haley, Arthur J.** 1976, Professor of Recreation Management and Tourism, B.A., State Illinois College, M.Ed., Springfield College, Ph.D., Texas A&M University
- Hall, John S.** 1973, Professor of Public Affairs, B.A., M.A., Simon DePue State University, Ph.D., University of Ohio
- Halverson, Roy K.** 1955, Professor Emeritus of Journalism and Mass Communication, B.S., M.S., University of Wisconsin, Madison; Ph.D., University of Illinois
- Hamilton, Robert** 1950, Professor of Music, B.M., Indiana University Bloomington, M.M., Catholic University of America
- Hammond, Philip C.** 1900, Adjunct Professor of Anthropology, B.A., Drew University; M.A., Ph.D., Yale University
- Hanish, Laura** 1977, Assistant Professor of Family and Human Development, B.S., Arizona State University, M.A., Ph.D., University of Illinois, Chicago
- Hanna, Albert Lyle** 1961, Professor Emeritus of Music, B.M., University of Cincinnati, Ph.D., Indiana University, Bloomington
- Hansen, Cory Cooper** 1971, Lecturer of Curriculum and Instruction, B.A., University of Calgary, Canada, M.Ed., Ph.D., Arizona State University
- Hanson, Gary** 1979, Professor of Educational Leadership and Policy Studies, Academic Program Coordinator, Educational Policy Studies and 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** 1965, Professor Emerita of Curriculum and Instruction; B.A., Southwestern University, M.A., Cornell University, Ph.D., University of Texas, Austin
- Haried, Andrew A.** 1969, Professor Emeritus of Accountancy and Information Management, B.A., Hastings College, M.A.S., Ph.D., University of Illinois, C.P.A., Arizona Illinois, North Carolina
- Harlan, Sharon L.** 1978, Associate Professor of Sociology, B.A., Northeastern University, M.A., Ph.D., Cornell University
- Harrigan, Carol Ann** 1998, Faculty Associate of Nursing, B.S.N., Rhode Island College; M.S.N., Indiana University
- 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.** 1975, Assistant Professor of English, B.A., M.A., Arizona State University
- Harris, Mark** 1981, 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.** 1979, Associate Professor of Biology, B.S., University of Toronto, Canada, M.S., University of Pittsburgh, Ph.D., University of Colorado
- Hartman, Thomas S.** 1999, Assistant Professor of Architecture, D.P.L.G., Paris School of Business France
- 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.T.E., Oklahoma A&M University
- Hathfield, Mary M.** 1985, Professor Emerita of Curriculum and Instruction, B.S., M.S., Ph.D., University of Kansas
- Haugen, Kathryn L.** 1975-1992, Faculty Associate of Nursing, B.S., Adelphi University, M.S., Arizona State University
- Hauser, Carmela** 2001, Faculty Associate of Nursing, B.S., University of Rochester, M.S., University of San Diego
- Hawkos, Lise J.** 1981, Associate Museum Professional, Slide Collection, School of Art, B.A., United States International University; M.A., University of Wisconsin, Madison
- Hayes, Colleen** 1975, Lecturer of Computer Information Systems, B.S., M.B.A., Arizona State University
- Hayes, Mark** 1996, Assistant 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 Ontario, Canada
- Hazel, Jeffrey R.** 1975, Professor of Biology, B.A., College of Worcester, M.S., Ph.D., University of Illinois
- He, Jiping** 1994, Associate Professor of Biotechnology, B.S., Hua hua University of Science and Technology, Wuhua, China, M.S., Ph.D., University of Maryland
- Hedrick, Philip W.** 1972, Professor of Biology, B.A., Harvard College, M.S., Ph.D., University of Minnesota
- Heenan, Katherine I.** 1978, Senior Lecturer of English, B.A., California State University, Chico, M.A., Ph.D., University of Connecticut, Storrs
- Hegmon, Michelle** 1997, Associate 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
- Heindl, Jennifer** 1991, Lecturer of the Barrett Honors College, B.A., M.A., Ph.D., University of California, Berkeley
- Hejduk, Renata** 1977, Assistant Professor of Architecture, B.A., Bard College, M.A., Tufts University
- Heller, Jules** 1966, Professor Emeritus of Art, Dean Emeritus, Heber College of Fine Arts, B.A., Arizona State University, M.A., Columbia University, Ph.D., University of Southern California

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**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 of Supply Chain Management; B.S., M.B.A., University of Washington; Ph.D., University of Oregon

**Hendricks, Lutz** (1996). Assistant Professor of Economics; Diplom-Volkswirt, Universität zu Köln (Germany); M.A., American University; Ph.D., University of Pennsylvania

**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). Associate Professor 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

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**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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**Herbots, Nicole** (1991). Associate Professor of Physics and Astronomy; Engineering Degree, Ph.D., Catholic University of Louvain (Belgium)

**Herman, George R.** (1956). Professor Emeritus of English; M.A., University of Kansas

**Herman, Richard M.** (1992). Adjunct Professor of Bioengineering; B.S., Case Western Reserve University; M.B., B.Ch., B.A.O., Queen's University Faculty of Medicine (United Kingdom)

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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

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**Hertz, Michael G.** (1987). Associate Professor of Finance; B.A., M.B.A., M.S., University of Rochester; Ph.D., University of Oregon

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**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 Music; B.M., University of  
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**Higgins, Norman C.** (1968). Professor Emeritus of Educational Media and Computers; B.S., Central Missouri State College; M.S., Ph.D., Syracuse University

**Higgins, Walter T. Jr.** (1967). Professor of Electrical Engineering; B.E.E., Manhattan College; M.S., Ph.D., University of Arizona

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**Hill, Gary W.** (1999). Professor of Music; Director of Bands; B.M.E., M.M., University of Michigan

**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

**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 Exercise Science and Physical Education; A.B., Oberlin College; M.A., University of Iowa; Ph.D., Pennsylvania State University

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- Hirleman, Edwin D. Jr.** 1977, Professor Emeritus of Mechanical and Aerospace Engineering; B.S.M.E., M.S.M.E., Ph.D., Purdue University
- Hitt, Michael** 2000, Professor and Weatherup Overby Chair in Executive Leadership; B.B.A., M.B.A., Texas Tech University Ph.D., University of Colorado
- Hoffer, Warren W.** (1972), Professor 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, College of Business B.S. Grand Valley State University, M.A., Ph.D., Michigan State University
- Hoffman, Steven A.** 1985, Associate Professor of Microbiology, 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
- Hofmann, Gretchen E.** (1999), Assistant Professor of Biology; B.S., University of Wyoming; M.S., Ph.D., University of Colorado, Boulder
- Hogan, Fiona** 1984, Assistant Research Professor Cancer Research Institute, B.Sc., M.Sc., Ph.D., University College, Dublin (Ireland)
- Hogan, Timothy D.** 1970, Professor of Economics, Director Center for Business Research, Director, L. William Steadman Research Institute, A.B., University of California, Berkeley, M.A., University of California, Davis Ph.D., Virginia Polytechnic Institute and State University
- Hogg, Gary L.** 1995, Professor of Industrial Engineering, Chair Department of Industrial Engineering, B.S., Texas A&M University, M.S., Ph.D., University of Texas, Austin
- Hogue, Brenda** 2002, Associate Professor of Microbiology B.A., Mississippi University, M.Ed., Duke University, Ph.D., University of Tennessee
- Hokin, Jeanne** 1997, Senior Lecturer 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.** 1995, Associate Professor of Music, B.A., M.A., Mills College; Ph.D., University of Washington
- 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 Biotechnology; 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
- Holway, James** 1993, Faculty Associate of Planning and Landscape Architecture, B.A., Cornell University M.R.P., Ph.D., University of North Carolina, Chapel Hill
- 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, Ph.D., University of Vienna, Austria
- Hooper, J. Kenneth** (1991), Professor of Plant Biology; Chair, Department of Plant Biology; Chair, Molecular Biosciences and Biotechnology Program, B.A., Goshute College, M.S., Ph.D., University of Michigan
- Hood, Stafford** 1992, Associate Professor of Counselor Education B.A., M.S., University of Wisconsin, Whitewater, Ph.D., University of Illinois
- Hoover, Helene M.** 1957, Professor of Family and Human Development, B.S., M.S., Louisiana State University Ed.D., Oklahoma State University
- Hope, Diane** 1997, Assistant Research Professor of Biology, B.S., University of London, United Kingdom; M.S., Ph.D., University of Aberdeen, United Kingdom
- Hopkins, Paul T. Jr., Capt.** 2000, Assistant Professor of Military Science; B.S., Wheaton College
- Hoppensteadt, Frank C.** 1995, Professor of Mathematics and Statistics and Electrical Engineering, Director, Center for System Science and Engineering Research; B.A., Butler University; M.S., Ph.D., University of Wisconsin, Madison
- Horan, Elizabeth R.** 1989, Associate Professor of English, A.B., Columbia University, 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
- Horowitz, Renee** 1986, Professor of Information and Management Technology B.A., Brooklyn College, M.A., Ph.D., University of Colorado
- Horwath, Peter** 1975, Professor of German; Abitur, Realschule, 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
- Hoult, Thomas Ford** 1964, Professor Emeritus of Sociology, B.A., University of Illinois; M.A., Whittier College, Ph.D., University of Southern California
- 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.** (1954), Professor 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
- Hu, Qiang** (2001), Assistant Research Professor of Plant Biology B.S., Hubei University, China; M.S., Institute of Hydrobiology, Chinese Academy of Sciences, China; Ph.D., Ben Gurion University of the Negev, Israel

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- 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; 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 for Planning and Administration; B.S., Hardin College, M.S. Ph.D., University of Arizona
- Huey, Kimberly A.** 2001, Assistant Professor of Exercise Science and Physical Education, B.S., Seattle Pacific University, M.S., University of Arizona, Ph.D., University of California, San Diego
- 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, Chair, International Switching Symposium, Interim Director, Telecommunications Research Center, B.S., M.S., Ph.D., Massachusetts Institute of Technology
- Huizingh, William** 1959, Professor Emeritus of Accountancy and Information Management, B.S.B.A., M.B.A., University of Denver, Ph.D., University of Michigan, C.P.A., Arizona, Colorado
- Humphreys, Ted** 1966, Professor of Philosophy, Dean the Barrett Honors College; A.B., M.A., University of California, Riverside, Ph.D., University of California, San Diego
- Humphreys, Jere T.** 1987, Professor of Music, B.M., University of Mississippi, M.M., Florida State University, Ph.D., University of Michigan
- Hunnicut, Kay Hartwell** 1975, Associate Professor of Educational Leadership and Policy Studies; Academic Program Coordinator, DELTA Doctorate, B.S., M.A., Murray State University; Ph.D., Southern Illinois University Carbondale, J.D., Arizona State University
- 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
- Hunter, Sue** (1993) Assistant Librarian, Hayden Reference Services, B.A., McMaster University, Canada, M.L.S., Dalhousie University, Canada
- Huntington, Virginia R.** 1962, Professor Emerita of Accountancy and Information Management, B.A., M.B.A., University of Kansas; Ph.D., University of Texas; C.P.A., Arizona, Missouri
- Hurdle, Donna E.** 1997, Assistant Professor of Social Work, B.A., Susquehanna University, M.S.W., University of Maryland, Baltimore, Ph.D., University of South Carolina, Columbia
- Hurlbert, Glenn** 1990, Associate Professor of Mathematics and Statistics, B.S., Wake Forest University, M.Sc., State University of New York, Stony Brook; Ph.D., Rutgers, The State University of New Jersey
- Huss, Gary** 1998, Senior Research Scientist of Geological Sciences, B.A., Rice University, M.S., University of New Mexico, Ph.D., University of Missouri
- Hussman, Stephen J.** 1969, Assistant Archivist, B.A., Winthrop College of Ohio; M.A., Wright State University
- Huston, Gerald D.** 1967, Professor Emeritus of Accountancy and Information Management; B.S., M.A., Ph.D., University of Iowa
- Hutt, Michael D.** 1982, Distinguished Professor of Marketing; B.B.A., M.B.A., Ohio University; Ph.D., Michigan State University
- Hwang, Yuhchang** 1995, Associate Professor of Accountancy and Information Management, B.A., Fune Catholic University, Taiwan, M.S., National Cheng Ching University, Taiwan, Ph.D., University of California, Berkeley

### I

- Iasemidis, Leon D.** 1971, Associate Professor of Biomechanics, 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 Plant Biology, 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 and Education, B.S., Grand Canyon University, M.A., Ph.D., Arizona State University
- Ihrig, Edwin** 1969, 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 and Information Management; B.S., Valley City State College, M.A., University of North Dakota; Ph.D., University of Illinois, C.P.A., Illinois
- Ingraham, Leonard W.** 1971, Lecturer Emeritus of Education, B.S., City College of City University; M.A., Ed.D., Columbia University
- Ingram, David** 1995, 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** 2011, Assistant Professor of Architecture, B.Eng., Slough City Polytechnic, United Kingdom, M.S., University of Cambridge, United Kingdom
- Inskip, Gordon C.** 1968, Professor Emeritus of Management, B.Ch.E., Ohio State University; Ph.D., Columbia University
- Irvine, Daniel E.** 1995, Lecturer of Theater, B.F.A., M.F.A., University of North Carolina, Chapel Hill
- 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, 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, Doctoral Student, Michigan, B.A., University of Arizona, M.A., University of Colorado

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### J

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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, 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

**Jacobs, Bertram L.** (1985), Professor of Microbiology; Director, Interdisciplinary Committee for Molecular and Cellular Biology; 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

**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), Associate 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

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**Jakob, John H.** (1960), Professor Emeritus of Architecture; B.Arch., Ohio State University; M.S.Arch., Columbia University

**James, Melissa A., SSG** (2000), Instructor of Military Science; A.A., Kansas State University

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**Jennings, Marianne M.** (1977), Professor of Legal and Ethical Studies; B.S., J.D., Brigham Young University

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**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.D., M.S., 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 and Information Management; 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), Assistant Professor of English; B.A., Saint Francis College, Brooklyn; M.A., Monterey Institute of International Studies; Ph.D., Georgetown University

**Johnson, Paul C.** (1994), Associate Professor of Civil and Environmental 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 Biology; B.S., M.S., University of Illinois, Urbana-Champaign; Ph.D., Arizona State University

**Johnson, Roy M.** (1952-53; 1955), Professor Emeritus of Microbiology; A.B., M.S., University of Chicago; Ph.D., University of New Mexico

**Johnson, Wendee** (1990), Clinical Assistant Professor of Nursing; B.S.N., Gustavus Adolphus College; M.S.N., University of Pennsylvania

## ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

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**Johnston, Hubert** 1986, Clinical Associate Professor of Social Work, B.S. Cheyney State College, M.A., Central Michigan University, Ph.D., Cornell University

**Jones, Austin E.** (1965), 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

**Jones, Jennifer** 1999, Adjunct Professor of Anthropology, B.A. State University of New York, Binghamton, Ph.D., Arizona State University

**Jones, John** (1999), Associate Professor of Mathematics and Statistics, B.S., M.S., Associate Chair Undergraduate Studies, A.B., University of California, Berkeley, Ph.D., Harvard University

**Jones, Marion K.** 1970, Professor Emerita of Dance, B.A., Wayne State University, M.A., Arizona State University

**Jones, Owen D.** 1994, Professor of Law, B.A., Amherst College, J.D., Yale University

**Jones, Ruth S.** (1981), Professor of Political Science, Executive Assistant for University Programs, B.S., Indiana State University, M.A., Ph.D., Georgetown University

**Jonsson, Hjorleifur** 1999, Assistant Professor of Anthropology, B.A., University of Iceland, Iceland, M.A., University of Iowa, M.A., Ph.D., Cornell University

**Jou, Youngjoong** 2011, Assistant Professor of Electrical Engineering, B.S., M.S., Korea University, South Korea, Ph.D., Georgia Institute of Technology

**Jordan, K. Forbis** 1987, Professor Emerita of Educational Administration and Supervision, A.B., M.A., Western Kentucky State College; Ed.D., Indiana University

**Joshi, Lokesh** 2010, Assistant Research Professor of Plant Biology, B.S., M.S., University of Rajasthan, India, Ph.D., University of Bath, United Kingdom

**Joyal, Elaine** 1998, Adjunct Professor of Anthropology; B.A., Antioch College; M.S., Oregon State University, Ph.D., Arizona State University

**Juergens, Jennifer L.,** 2001, Assistant Professor of Finance, B.S., The Pennsylvania State University, Ph.D., The Pennsylvania State University

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**Justus, Jerry T.** 1968, Professor Emeritus of Biology, B.A., Franklin College, M.A., Ph.D., Indiana University, Bloomington

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## K

**Kadell, Kevin** 1981, Professor of Mathematics and Statistics, B.A., California State University, Sacramento, M.A., University of Maryland, Ph.D., Pennsylvania State University

**Kader, David** 1979, Professor of Law, B.A., California State University, Fresno, Ph.D., University of Washington, LL.M., University of London, United Kingdom

**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

**Kahn, B. Winston** (1966), Associate Professor of History, B.A., National Taiwan University, Taiwan, M.A., University of Minnesota, Twin Cities, Ph.D., University of Pennsylvania

**Kahn, Kim** 1989, Professor of Political Science; A.B., M.A., Ph.D., University of Michigan

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**Kambhampati, Subbarao** 1991, Professor of Computer Science and Engineering, B.Tech., Indian Institute of Technology, India, M.S., Ph.D., University of Maryland, College Park

**Kamins, Martin P.** 1970, Professor Emeritus of Curriculum and Instruction, B.Ed., University of Miami, M.S., Florida State University, Ed.D., Wayne State University

**Kaminsky, Elijah Ben-Zion** 1961, Professor Emeritus of Political Science, A.B., A.M., Ph.D., Harvard University

**Kaminsky, Selina K.** 1988, Librarian Emerita, B.Ed., University of Maryland; M.A., University of Dover

**Kaplan, Catherine** 2011, Assistant Professor of History; B.A., Amherst College, M.A., Ph.D., University of Michigan

**Kaplan, Robert G.** 1984, Professor of Dance, B.M.E., University of Hartford, M.M., Arizona State University

**Kaplan, Steven** 1981, Professor of Accountancy and Information Management, B.S., Arizona State University, M.A.S., Ph.D., University of Illinois

**Karady, George** 1986, Professor of Electrical Engineering, Salt River Project Chair, Diploma, Technical University, Budapest, Hungary, Candidate of Technical Sciences, Hungarian Academy of Science, Hungary, Ph.D., Budapest University for Technical Sciences, Hungary

**Karam, Lina** 1995, Associate Professor of Electrical Engineering; B.E., American University of Beirut, Lebanon, M.S., Ph.D., Georgia Institute of Technology

**Karcher, Timothy** 1989, Associate Research Professor, Center for Solid State Science, B.Sc., M.Sc., University of Wisconsin, Milwaukee

**Karjala, Dennis S.** 1978, Professor of Law, B.S.E., Princeton University; M.S., Ph.D., University of Illinois, J.D., University of California, Berkeley

**Karnes, Thomas L.** 1968, Professor Emeritus of History, A.B., Colorado University, A.M., Ph.D., Stanford University

**Karoly, Paul** 1981, Professor of Psychology, B.A., City College of New York, Ph.D., University of Rochester

## ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

**Kashiwagi, Dean T.** (1992). Associate Professor of Construction: B.S., University of Hawaii, Manoa; M.S., Ph.D., Arizona State University

**Kastenbaum, Beatrice** (1982). Clinical Associate Professor of Nursing: B.S.N., University of Michigan; M.S.N., Wayne State University

**Kastenbaum, Robert J.** (1981). Professor Emeritus of Gerontology and Communication: B.A., Long Beach State College; Ph.D., University of Southern California

**Katz, Richard C.** (1990). Adjunct Professor of Speech and Hearing Science: B.A., M.A., University of Massachusetts; Ph.D., University of Florida

**Katzman, Elaine Menter** (1983). Professor Emerita of Nursing: B.S., M.S., Ph.D., Syracuse University

**Kaufman, Herbert M.** (1973). Professor of Finance: Chair, Department of Finance: B.A., State University of New York, Binghamton; Ph.D., Pennsylvania State University

**Kaufman, Irving** (1965). Professor Emeritus of Electrical Engineering: B.E., Vanderbilt University; M.S., Ph.D., University of Illinois

**Kaufmann, William B.** (1968). Professor of Physics and Astronomy: A.B., M.A., Ph.D., University of California, Berkeley

**Kawski, Matthias** (1988). Professor of Mathematics and Statistics; Ph.D., University of Colorado



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Regents' Professor of Law: B.S., Massachusetts Institute of Technology; M.A., Harvard University; J.D., Yale University

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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

**Keating, Thomas** (1972). Associate Professor of Political Science: B.A., M.A., California State University, Sacramento; M.P.A., Ph.D., Indiana University

**Keats, Barbara W.** (1984). Associate Professor of Management: B.A., Louisiana Technical University; M.S., Northeast Louisiana University; Ph.D., Oklahoma State University

**Keats, J. Bert** (1984). Professor Emeritus of Industrial Engineering: B.S.I.E., Lehigh University; M.S., Ph.D., Florida State University; Ph.D., Oklahoma State University

**Keefe, Donald L.** (1987). Associate Professor of Supply Chain Management: B.S., Carnegie-Mellon University; M.S., Stanford University; M.S., Ph.D., University of Michigan

**Kehl, Delmar G.** (1965). Professor of English: B.A., Bob Jones University; M.S., University of Wisconsin, Madison; Ph.D., University of Southern California

**Keim, Gerald** (2001). Clinical Professor of Executive Education: B.S., University of Delaware; M.A., Ph.D., Virginia Polytechnic Institute and State University

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**Keith, Marlow F.** (1946). Professor Emeritus of Technology: B.A., M.A., Arizona State University

**Keith, Susan** (1967). Assistant Professor of Journalism and Mass Communication: B.S., University of Montevallo; M.A., University of South Florida; Ph.D., University of North Carolina

**Keith, Verna M.** (1990). Associate Professor of Sociology: Chair, Department of Sociology: B.S., University of Central Arkansas; M.A., Ph.D., University of Kentucky



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Regents' Professor of Spanish: Director, Hispanic Research Center: B.A., University of the Americas (Mexico); M.A., New School for Social Research; M.A., Ph.D., Columbia University

**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, 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

**Kelly, Rob Roy** (1983). Faculty Associate of Design; Professor Emeritus of Art: B.F.A., Minneapolis School of Art; M.F.A., Yale University

**Kennedy, Thomas D.** (1974). Professor Emeritus of Justice Studies: B.A., Tulane University; M.A., Ph.D., Louisiana State University, Baton Rouge

**Kenney, Janet W.** (1988). Professor Emerita of Nursing: B.S., Alfred University; M.S., Boston University; Ph.D., State University of New York, Buffalo

**Kenney, Patrick** (1986). Professor 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 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

**Khoo, 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: B.S.E.E., M.S., Ph.D., Washington State University

**Kidd, Pamela** (2000). Professor of Nursing: Associate Dean for Graduate Programs and Research: B.S.N., University of Kentucky; M.S.N., University of Cincinnati; Ph.D., University of Arizona

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## ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

**Kiesow, Milton A.** (1957). Professor Emeritus of Education; B.S., University of Wisconsin; M.A., Ph.D., University of Nebraska, Lincoln

**Kigin, Denis J.** (1958-65; 1967). Professor Emeritus of Technology; Dean Emeritus, Continuing Education and Summer Sessions; B.S., Mankato State University; M.S., University of Wisconsin, Stout; Ed.D., University of Missouri

**Kihl, Mary** (1996). Professor of Planning and Landscape Architecture; Associate Dean, College of Architecture and Environmental Design; Director, Herberger Center for Design Excellence; 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, 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, 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, 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 Plant Biology; B.S., University of Minnesota; M.S., Iowa State University; Ph.D., Cornell University

**Kimbel, William H.** (1997). Associate 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

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**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 Biology; B.S., University of Illinois, Urbana-Champaign; M.S., Ph.D., University of California, Berkeley

**Kirk, Dwayne** (2000). Adjunct Professor of Plant Biology; 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

**Kisielewski, Robert V.** (1978). Professor Emeritus of Technology; B.S.M.E., M.S.M.E., University of Wisconsin, Madison

**Klann, Margaret L.** (1945). Professor Emerita of Physical Education; 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 of History; B.A., New York University; M.A., University of Michigan; Ph.D., New York University



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Regents' Professor of Art; B.S., Saint Lawrence University; M.F.A., State University of New York, Buffalo

**Kliwer-Britton, Darleen** (1975). Professor of Music; B.M.E., Bethany College; M.M., Wichita State University

**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 Plant Biology; B.S., M.S., University of Wisconsin, Milwaukee; Ph.D., Cornell University

**Knapp, Margaret M.** (1990). Professor of Theatre; Associate Dean for Research and Administration, Herberger College of Fine Arts; B.A., LeMoyne 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)

**Knipping, Uwe Fred** (1988). Associate Research Professional of Physics and Astronomy; B.Sc., University of Cologne (Germany)

**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

## ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- 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** 1988, Professor of Women's Studies, A.B., Princeton University, Ph.D., Boston University
- Kochenderfer Ladd, Becky** 2001, Assistant Professor of Educational Psychology, B.A., San Diego State University, M.S., Ph.D., University of Illinois - Urbana-Champaign
- Koeneman, James B.** 1984, Adjunct Professor of Biological Engineering, 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, Associate Professor of Nursing; Chair, Division of Community Health/Psychosocial Nursing Systems, B.S., Stanford University; M.N., University of Washington, M.A., Ph.D., University of Arizona
- Konjevod, Goran** 2002, Assistant Professor of Computer Science and Engineering, B.Sc., University of Zagreb, Croatia; M.Sc., Ph.D., Carnegie Mellon University
- Konomos, Philip J.** 1991, Assistant Lecturer Research 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., Stetson University
- Koopmans, Rachel** 2001, Assistant Professor of History, B.A., Calvin College, M.A., North Western 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
- Koshinsky, Deborah H.** 2000, Associate Librarian, Head, Architecture and Environmental Design Library, B.A., Ohio State University, M.L.S., Simon College
- Koss Chioino, Joan D.** 1992, Professor 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
- Kouvetakis, John** 1997, Associate Professor of Chemistry and Biochemistry, B.S., Ph.D., University of California - Berkeley
- Kozacik, Dorothy Piercey** 1968, Professor Emerita of Education, B.A., College of St. Francis, M.A., Arizona State University, Ph.D., University of Arizona
- Kozicki, Michael** 1986, Professor of Electrical Engineering, Director, Center for Solid State Electronics Research, B.S., Ph.D., University of Illinois - Urbana-Champaign
- Krahenbuhl, Gary S.** 1983, Professor of Educational Science and Philosophy, Education Service Provider, B.S., M.S., Northern Illinois University, Ed.D., University of Northern Colorado
- Krajcinovic, Dusan** 1989, Professor of Engineering, B.Sc., M.Sc., University of Belgrade, Yugoslavia, Ph.D., Northwestern University
- Krause, Daniel R.** 2000, Assistant Professor of Supply Chain Management, B.A., Fort Lewis College, M.B.A., Ph.D., Arizona State University
- Krause, Stephen J.** 1981, Professor of Materials Science and Engineering, Associate Chair for Materials Science and 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** 1966, Professor Emeritus of Geological Sciences, Ph.B., S.B., S.M., Ph.D., University of Chicago
- Kroeger, Michael** 1997, Faculty Associate of Design, M.F.A., Rhode Island School of Design
- Kroelinger, Michael D.** 1985, Professor 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
- Krueger, Janelle** 1984, Professor Emerita of Nursing; Dean Emerita, College of Nursing, B.S., M.S., Ph.D., University of Colorado
- Krus, David J.** 1980, Professor of Psychology in Education, B.A., M.A., Charles University, Ph.D., University of Minnesota, Twin Cities
- Krutz, Glen** 1999, Assistant Professor of Political Science, B.A., M.P.A., University of Nevada; Ph.D., Texas A&M University
- Kzys, Katherine J.** 1999, Associate Archivist, Special Collections, B.A., California State University, Hayward, M.F.A., Arizona State University
- Kuang, Yang** 1988, Professor of Mathematics and Statistics, B.S., University of Science and Technology - China, Ph.D., University of Alberta - Canada
- Kuby, Lauren H.** 1995, Academic Associate, Communications Manager, B.A., University of Chicago, M.A., Arizona State University
- Kuby, Michael** 1985, Associate Professor of Geography, B.A., University of Chicago, Ph.D., Boston University
- Kuester, James L.** 1969, Professor Emeritus of Chemical Engineering, B.S., University of Texas - Austin, M.E., Ph.D., Texas A&M University
- Kugelmass, Jack** 1998, Professor of Interdisciplinary Humanities, B.A., McGill University - Canada, M.A., Ph.D., New School for Social Research
- Kuiper, Hendrik J.** 1971, Professor of Mathematics and Statistics, B.S., University of Wisconsin - Milwaukee, M.S., M.A., Ph.D., University of Wisconsin - Madison
- Kulahci, Murat** 2002, Assistant Professor of Industrial Engineering, B.S., Bogazici University - Turkey, M.E., Illinois Institute of Technology, M.S., Ph.D., University of Wisconsin - Madison

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Regents' Professor of Educational Psychology;  
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**Kulik, Carol** (1997). Professor of Management: B.S., Ph.D.,  
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**Kulis, Stephen** (1984). Professor of Sociology: B.A., George  
Washington University; M.A., Ph.D., Columbia University

**Kulkarni, Uday R.** (1988). Associate Professor of Computer  
Information Systems: B.Tech., Indian Institute of Technology  
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**Kumar, Ajith** (1991). Professor of Marketing: B.S., Indian  
Institute of Technology (India); Postgraduate Diploma, Indian  
Institute of Management (India); Ph.D., University of  
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**Kumar, Sudhir** (1998). Assistant Professor of Biology: B.S., M.S.,  
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**Kuo, Chen-Yuan** (1986). Associate Professor of Engineering;  
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**Kupper, Eugene** (1996). Associate Professor of Architecture;  
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**Kurtz, Lynn C.** (1967). Associate Professor of Mathematics and  
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### L

**La Valley, Mary** (2000). Faculty Associate of Nursing: B.A.,  
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**Ladd, Gary W.** (2001). Professor of Family and Human  
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**LaFaro, Lydia E.** (1988). Librarian, Hayden Reference Services:  
B.S., Georgetown University; M.L.S., Emory University

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Languages and Literatures; Director, Language Computing  
Laboratory; B.A., Cornell University; M.A., Arizona State  
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College, Vicenza (Italy); Laurea, University of Study of Urbino  
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Architecture: A.B., M.F.A., Princeton University; Ph.D., University  
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**Lai, Ying-Cheng** (1999). Professor of Mathematics and Statistics  
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Statistics: B.S., South Dakota School of Mines and Technology;  
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**Lamorey, Suzanne G.** (1998). Assistant Professor of Curriculum  
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**Lan, Zhiyong** (1991). Associate Professor of Public Affairs; B.A.,  
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**Landeira, Ricardo L.** (1962). Professor Emeritus of Spanish;  
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Regents' Professor of Exercise Science and  
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University of New York, Brockport; M.S., University of  
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**Landrum, Leslie R.** (1986). Herbarium Curator of Plant Biology;  
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**Landschoot, Thomas** (2001). Assistant Professor of Music; M.M.,  
Conservatory of Music, Antwerp (Belgium); M.M., University of  
Michigan; Artist Diploma, Indiana University; Artist Diploma,  
Conservatory of Music, Maastricht (Netherlands)

**Lane, Peter** (1998). Assistant Professor of Management; B.S.,  
University of New Hampshire; M.B.A., University of  
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**Laner, Mary R.** (1976). Professor Emerita of Sociology; A.B.,  
University of Chicago; M.A., University of New Mexico; Ph.D.,  
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**Langdon, Debra Seaman** (2000). Senior Lecturer of Supply Chain  
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**Langland, Jeff** (1995). Assistant Research Professor of  
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**Lanyon, Richard I.** (1975). Professor of Psychology; B.E.,  
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**Larimer, John W.** (1969). Professor of Geological Sciences; B.A.,  
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**Larsen, Larissa** (2000). Assistant Professor of Planning and  
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- Larson-Bennett, Donna Rae** 1972, Law Librarian Emerita, B.A. M.A.L.S., University of Michigan
- Lastovicka, John I.** 1977, Professor of Marketing, B.S., M.S., Ph.D., University of Illinois
- Lattouf, Mirna** 2011, Lecturer, Bachelor of Interdisciplinary Studies Program and Program Coordinator of Undergraduate Academic Services, B.A. Rutgers University, M.A., New York University, Ph.D., University of Arizona
- Laubichler, Manfred** 2011, Assistant Professor of Biology, M.Sc., University of Vienna, Austria, M.Ph., Yale University, M.A., Princeton University, Ph.D., Yale University, Ph.D., Princeton University
- Lauderdale, Pat** 1981, Professor of Justice Studies, B.A., University of Oklahoma, M.A., University of Texas, Austin; M.A., Ph.D., Stanford University
- Lavrin, Asuncion** 2005, Professor of History, B.A., University of Havana, M.A. Radcliffe College, Ph.D., Harvard University
- Lawson, Anton F.** 1977, Professor of Biology, B.S. University of Arizona, M.A. University of Oregon, Ph.D., University of Oklahoma
- Le, Thuy Kim Pham** 1997, Instructor of Vietnamese, B.A. Saigon University, Vietnam, B.A. M.Ed., Arizona State University
- Leathers, Chester R.** 1957, Professor Emeritus of Microbiology, B.S. Eastern Illinois University; M.S., Ph.D. University of Michigan
- Lebed, Richard F.** 2002, Assistant Professor of Physics and Astronomy, B.S., Michigan State University, M.A., Ph.D., University of California, Berkeley
- Leclerc, Denis** 2004, Assistant Professor of Religion, M.A., Ph.D., University of Toronto, M.S., University of Upper Normandy, France, M.S. Ph.D., Arizona State University
- LeCroy, Craig** 1984, Professor of Social Work, B.S.W., San Jose State University, M.S.W., Western Michigan University, Ph.D., University of Wisconsin
- Lee, Deanna** 2001, Assistant Professor of Accountancy and Information Management, B.S. University of Pennsylvania, Ph.D., University of Illinois
- Lee, James J.** 1975, Adjunct Faculty of Microbiology, B.S., State University of New York, Stony Brook, Ph.D., California Institute of Technology
- Lee, Nancy A.** 1995, Adjunct Faculty of Microbiology, B.S., Memphis State University; Ph.D. Central University
- Lee, Iae-woon** 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 Central University, Taiwan; M.S., Rensselaer Polytechnic Institute, Ph.D., University of Michigan
- Lefevre, Mary Anne** 1990, Clinical Assistant Professor of Clinical Laboratory Sciences, B.S., Arizona State University, M.A. Central Michigan University
- Lehman, James P.** 1955, Associate Research Professor of Cleveland Bibliography, B.S., M.S., Miami University, Ph.D., University of Cincinnati
- Lehman, Peter** 1999, Professor of Interdisciplinary Humanities, B.S., M.A., Ph.D., University of Wisconsin, Madison
- Leibold, Anne M.** 1977, Librarian Emerita, M.A., University of Paris, France
- Leigh, Frederic A.** 1979, Senior Administrative Professor and Clinical Professor of Journalism and Mass Communication, B.A., University of South Dakota, M.A., University of Iowa; Ed.D., Arizona State University
- Leighninger, Leslie** 2000, Professor of Social Work, Director, School of Social Work; B.A., Oberlin College, M.S.W., Syracuse University, D.S.W., University of California Berkeley
- Leinenweber, Kurt** 1994, Assistant Research Professional of Chemistry and Biochemistry, B.S., Brown University, Ph.D., Princeton University
- Lemery, Kathryn** 2001, Assistant Professor of Psychology, B.A. University of Oregon, M.S., Ph.D., University of Wisconsin, Madison
- Lendle Janet** 2001, Faculty Associate of Nursing, B.S., College of St. Scholastica, M.S.N., University of Minnesota
- Lentz, Richard G.** 1985, Associate Professor of Journalism and Mass Communication; A.B., University of North Alabama, M.A., Southern Illinois University Carbondale, Ph.D., University of Iowa
- 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
- Leonard, Donald J.** 1974, Associate Professor of Management Communication, B.S., M.B.A., Nicholls State University, Ph.D., Louisiana State University
- Leonard, Philip A.** (1968), Professor of Mathematics and Statistics, A.B., Boston College; M.A., Ph.D., Pennsylvania State University
- Leong, Karen** 1969, Assistant Professor of Women's Studies, A.B., M.A., Ph.D., University of California, Berkeley
- Lersch, Judy** 1999, Faculty Associate of Nursing, B.S.N., University of Arizona; M.Ed., Northern Arizona University; M.S., Arizona State University
- Lerum, Vidar** 2000, Assistant Professor of Architecture, B.Arch., Norwegian Institute of Technology, Trondheim, Norway; M.S., Arizona State University; Ph.D., Norwegian University of Science and Technology, Trondheim, Norway
- Leshin, Laurie** 1998, Associate Professor of Geopolitical Sciences, B.S., Arizona State University, M.S., Ph.D., California Institute of Technology
- Leshowitz, Barry H.** 1970, Associate Professor of Psychology, B.S., M.A., Brooklyn College, Ph.D., City University of New York
- Leshy, John D.** 1980, Professor of Law, A.B., J.D., Harvard University
- 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, B.A., West Georgia College, M.A., Ph.D., Vanderbilt University
- Levan, Frederick D.** (1965), Professor Emeritus of Educational Administration and Supervision, B.S., M.Ed., Pennsylvania State University, Ed.D., Oklahoma State University
- Levine, Gustav** 1967, Professor Emeritus of Psychology, B.A., M.A., College of the City of New York, Ph.D., Columbia University
- Lewis, Charles F.** 1963, Research Specialist Emeritus, Center for Meteorite Studies, B.A., Adams State College
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**Linder, Darwyn E.** (1972). Professor of Psychology; Chair, Department of Psychology; B.A., Macalester College; Ph.D., University of Minnesota, Twin Cities

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**Logan, Earl Jr.** (1963). Professor Emeritus of Mechanical and Aerospace Engineering; B.S., M.A., Arizona State University; B.S.M.E., M.S.M.E., Texas A&M University; Ph.D., Purdue University

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- Loveless, Richard L.** 199, Professor Emeritus of Art: M.Ed., Pennsylvania State University
- Low, Stuart A.** 1979, Professor of Economics, B.S., M.S., Ph.D., University of Illinois
- Lowe, John W.** 1956, Professor Emeritus of Economics, B.S., Arizona State University, M.S., University of Wisconsin, Madison, Ph.D., University of Florida
- Lowe, Robert W.** 1966, Professor Emeritus of Romance Language, M.A., Columbia University, Doctorate, University of Paris, France
- Lowenthal, Gary T.** 1976, Professor of Law, A.B., Harvard College, Ph.D., University of Chicago
- Lu, Pao** 1964, Professor Emeritus of Physics and Astronomy, B.S., National Taiwan University, Taiwan; M.S., National Tsing Hua University, Taiwan; Ph.D., Iowa State University
- Luchsinger, Wayne W.** 1966, Professor Emeritus of Chemistry and Biochemistry, B.S., M.S., Ph.D., University of Minnesota, Twin Cities
- Luckingham, Bradford F.** 197, Professor Emeritus of History, B.S., Northern Arizona University, M.A., University of Missouri, Columbia, Ph.D., University of California, Davis
- Ludemann, Ruth S.** 1954, Professor Emerita of Nursing, B.S.N., Columbia University, M.S.N., Wayne State University, Ph.D., Arizona State University
- Luderer, Gottfried W.R.** 199, Professor Emeritus of Electrical Engineering, M.S.E.E., Ph.D., Technical University Braunschweig, Germany
- Ludlow, Elizabeth A.** 1972, Professor Emerita of Nursing, B.S.N., University of New Mexico, M.S., Arizona State University
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- Luecken, Linda J.** 200, Assistant Professor of Psychology, B.S., Ohio State University, M.A., University of North Carolina, Ph.D., Duke University
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- Luey, Beth** 1980, Senior Instructional Professional of History; Director, Scholarly Publishing; B.A., Radcliffe College, A.M., Harvard University
- Lujan, Carol C.** 1987, Associate Professor of Justice Studies; Director, American Indian Studies Program; B.A., M.A.P.A., Ph.D., University of New Mexico
- Lukas, Ronald J.** 1999, Adjunct Professor of Chemistry and Biochemistry, B.S., State University of New York, College of Cortland, Ph.D., State University of New York, Downstate Medical Center
- Lund, Giuliana** 1997, Assistant Professor of Interdisciplinary Humanities, B.A., Stanford University; M.A., Ph.D., University of Pennsylvania
- Lundgren, Harry R.** 1962, Professor Emeritus of Civil and Environmental Engineering, B.S.C.E., Purdue University, M.S., Arizona State University, Ph.D., Oklahoma State University
- Lundin, Robert F.** 1962, Professor Emeritus of Geological Sciences; B.A., Augustana College, M.S., Ph.D., University of Illinois
- Lussier, Mark S.** 1994, Associate Professor of English; B.A., University of Saint Thomas, M.A., Ph.D., Texas A&M University
- Lutyk, Carol** 2002, Assistant Professor of Journalism and Mass Communication; B.A., Smith College, M.A., George Washington University
- Lyman, Jeffrey** 1996, Associate Professor of Music; B.Mus., Tenple University; M.Mus., D.Mus., University of Michigan
- Lynch, David H.** 1976, Associate Professor of Management Communication, B.S., University of Illinois, M.S., Ed.D., Northern Illinois University
- Lynch, Jacquelyn** 2001, Lecturer of the Barrett Honors College; B.A., Kalamazoo College, M.A., Harvard University; Ph.D., Arizona State University
- Lynch, John M.** 1994, Lecturer of the Barrett Honors College; Director, Office of National Scholarship Advancement, B.Sc., Ph.D., University College, Dublin, Ireland
- Lynk, Myles** 20, Professor of Law, Kiewit Foundation Professor of the Legal Profession, A.B., J.D., Harvard University
- Lyons, Lucy** 1999, Assistant Librarian, B.A., San Diego State University, San Diego; M.A., Ohio State University, M.S., Pratt Institute
- Lytle, Robert G.** 1972, Professor Emeritus of Agrribusiness and Resource Management, B.S., Western Kentucky University, M.S., Arizona State University
- Lyubchenko, Yuri** 199, Assistant Research Scientist of Biology, M.S., Ph.D., Moscow Institute of Physics and Technology, Russia

## M

- Maccracken, Harriet** 1995, Senior Lecturer of Accounting and Information Management, B.S., Ohio State University; M.A., Arizona State University
- MacEachron, Ann** 1984, Professor of Social Work, B.A., Cornell University, M.S.W., University of Pittsburgh; Ph.D., Cornell University
- Macey, Donna J.** 1994, Clinical Associate Professor of Educational Administration and Supervision; Internship Coordinator, Educational Administration and Supervision; B.A., DePaul University, M.A., St. John's College, M.A., M.S.T., University of Chicago; Ph.D., Northwestern University
- MacKinnon, David** 199, Professor of Psychology, B.A., Harvard University, M.A., Ph.D., University of California, Los Angeles
- Mackinnon, Stephen R.** 1971, Professor of History, B.A., M.A., Yale University, Ph.D., University of California, Davis
- Mackulak, Gerald T.** 1980, Associate Professor of Industrial Engineering, Executive Associate Chair, Department of Industrial Engineering, B.S.I.E., M.S.I.E., Ph.D., Purdue University
- MacSwan, Jeff** 1998, Assistant Professor of Curriculum and Instruction, B.A., M.A., California State University, Long Beach, Ph.D., University of California, Los Angeles
- Madden, Dennis D.** 1990, Archivist Emeritus; B.A., Wright State University, M.A., Colorado State University
- Madden-Derdich, Debra** 1994, Assistant Professor of Family and Human Development; B.A., Washington and Jefferson College, M.A., Hollins College, Ph.D., Virginia Polytechnic Institute and State University
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**Mahajan, Subhash** (1997). Professor of Chemical and Materials Engineering; Chair, Department of Chemical and Materials Engineering; B.S., Punjab University (India); B.E., Metallurgy Indian Institute of Science (India); Ph.D., University of California, Berkeley

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**Manchester, Laurie** (2000). Assistant Professor of History; B.A., Wellesley College; M.A., M.Phil., Ph.D., Columbia University

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**Mankin, Lawrence D.** (1973). Professor of Public Affairs; B.B.A., City College; M.A., Ph.D., University of Illinois

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**Marc, Stephen Smith** (1998). Professor of Art; B.A., Pomona College; M.F.A., Temple University

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**Martinez, Quino E.** (1957). Professor Emeritus of Foreign Languages; B.S., New Mexico Western College; M.A., George Peabody College; Ph.D., University of North Carolina, Chapel Hill

**Martinez-Brawley, Emilia E.** (1992). Professor of Social Work; B.A., National University of Tucumán (Argentina); M.S.S., Bryn Mawr College; Ed.D., Temple University

**Marzke, Mary W.** (1978). Professor of Anthropology; B.A., University of California; M.A., Columbia University; Ph.D., University of California, Berkeley

**Marzke, Robert F.** (1969). Associate Professor of Physics and Astronomy; A.B., Princeton University; Ph.D., Columbia University

**Mason, Bruce B.** (1960). Professor Emeritus of Political Science; B.S., North Texas State College; M.A., Texas Christian University; Ph.D., University of Texas, Austin

**Mason, Marshall W.** (1994). Professor of Theater; B.S., Northwestern University

**Mass, Diana** (1974). Clinical Professor of Clinical Laboratory Sciences; B.S., University of Texas, Austin; M.S., Central Michigan University

**Massia, Stephen** (1998). Associate Professor of Bioengineering; B.S., Southwestern University; Ph.D., University of Texas

**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

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**Matt, Pamela** (1980). Associate Professor of Dance; B.A., University of Washington; M.A., University of Illinois

**Maatta, Robert** (1996). Human Resources Assistant, Department of Military Science; B.S., Lake Superior State University

**Matthews, James B.** (1989). Professor Emeritus of Aeronautical Management Technology; B.S., Rose-Hulman Institute of Technology; M.S., Massachusetts Institute of Technology; Ph.D., University of Arizona

**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 Biology; B.A., M.D., University of Colorado

**Mattson, Susan** (1993). Professor of 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). Faculty Associate 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

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Regents' Professor of Chemical and Materials Engineering and Solid State Science; B.S., Ph.D., Purdue University

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**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). Assistant Professor of Psychology; B.A., Brown University; M.S., University of California, Santa Barbara; Ph.D., Stanford University

**McBride, Ingrid** (2001). Clinical Assistant Professor; B.S., M.S., Arizona State University

**McBrien, Edward F.** (1986). Professor Emeritus of Electronic and Computer Engineering Technology; B.S.E., Fenn College; M.S.E.E., Cleveland 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

**McCartney, Martha R.** (1989). Senior Research Scientist, Center for Solid State Science; B.S., The Evergreen State College; Ph.D., Arizona State University

**McCormack, Brian** (2000). Lecturer, Division of Undergraduate Academic Services; Academic Coordinator, Bachelor of Interdisciplinary Studies Program; 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

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- McCoy, Ron** 1995, Professor of Architecture, Director, School of Architecture: B.S., University of Southern California; M.Arch., Princeton University
- McCready, Richard R.** 1967, Professor Emeritus of Accountancy and Information Management: B.S., Valley City State Teachers College; M.A., Ed.D., University of Northern Colorado
- McDermott, Lauren** 1991, 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 of Mathematics and Statistics: A.B., Kenes 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 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
- McEwen, Douglas R.** 1969, Professor Emeritus of Music: B.S. Bowling Green State University; M.M., Indiana University; Ed.D. University of Northern Colorado
- McFarland, Elaine H.** 1973, Professor Emerita of Health Science: B.A., Marquette College, M.N., Case Western Reserve University
- McGaughy, Robert W.** 1971, Professor of Biology; Director Interdisciplinary Committee for Molecular and Cellular Biology: B.A., Auburn College; M.A., University of Colorado; Ph.D., Boston University
- McGaw, Dickinson L.** 1965, Professor Emeritus of Public Affairs: B.A., M.A., Ph.D., Indiana University; Bloomington
- McGehee, Shelley** (1955), Librarian Emerita: B.Mis., Converse College; M.Mus., M.L.S., University of Alabama
- McGowan, Patrick J.** 1979, Professor of Political Science: B.A., University of the South; M.A., Johns Hopkins University; Ph.D., Northwestern University
- McGowan, Thomas M.** 1985, Professor of Curriculum and Instruction: B.A., Boston University; M.A., Ph.D., University of Nebraska, Lincoln
- McGrath, G.D.** 1950, Professor Emeritus of Education: Dean Emeritus, College of Education: A.B., Findlay College, M.A., University of Michigan; Ph.D., University of Colorado
- 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 Philosophy: 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** 1976, Assistant Professor of Art: B.A., North Carolina Central University; M.F.A., University of Pennsylvania
- McKely, 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 and Information Management: 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, Assistant Professor of Music: B.M., Oberlin College Conservatory, Ohio; M.M., Indiana University; Bloomington; D.M.A., University of Michigan, Ann Arbor
- McMahon, Jeff** 2011, Senior Lecturer of Theatre: B.A., State University of New York; M.F.A., Columbia University
- McManus, Elizabeth B.** 2007, Lecturer of the Barrett Honors College: B.A., M.A., Ph.D., University of Virginia
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- McMillen, Phyllis** 2007, 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
- McNamara, Ann** 1997, Faculty Associate of Nursing: B.S.N., Worcester State College; M.S., Arizona State University; Ph.D., University of Arizona
- McNeil, Elizabeth A.** 1998, Academic Associate of English: Academic Advisor: B.A., California State University, Chico; M.F.A., Arizona State University
- McNeill, Barry W.** 1976, Assistant Professor of Engineering: Vice Chair for 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 of Economic Outlook Center, Associate Dean for Executive and Professional Programs, College of Business: A.B., San Francisco State University; Ph.D., Virginia Polytechnic Institute and State University
- McShelley, Gerald R.** 1982, Professor Emeritus of Architecture, Dept. Arch., University College, London, United Kingdom; Dip.C.D., Edinburgh University, United Kingdom
- McSherry, Laurel** 1991, Associate Professor of Planning and Landscape Architecture: B.S.L.A., Rutgers, The State University of New Jersey; M.L.A., Harvard University
- 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 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.Mis., M.Mus., Tel Aviv University, Israel; D.M.A., Arizona State University
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**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)

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**Merbs, Charles F.** (1973). Professor of Anthropology; B.S., M.S., Ph.D., University of Wisconsin, Madison

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**Metos, Thomas H.** (1965). Professor Emeritus of Educational Administration and Supervision; B.S., M.S., Ph.D., University of Utah

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**Miller, Victor J.** (1958). Professor Emeritus of Agribusiness and Resource Management; B.S., M.S., Ph.D., University of Illinois

**Miller-Loessi, Karen A.** (1984). Associate Professor of Sociology; B.A., University of California, Berkeley; M.A., Ph.D., Stanford University

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**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

**Minter, Marshall R. Jr.** (1965). Professor Emeritus of Technology; B.S.M.E., Purdue University; M.S.M.E., University of Arizona

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**Misra, Rajeev** (1991). Professor of Microbiology; B.S., Kanpur University (India); M.S., G.B. Pant University (India); Ph.D., Adelaide University (Australia)

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## ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

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**Mobasher, Barzin** (1991). Associate Professor of Civil and Environmental Engineering; B.S., University of Wisconsin, Platteville; M.S., Northeastern University; Ph.D., Northwestern University

**Moeckel, Cindy L.** (1987). Associate Professor of Accountancy and Information Management; B.A., M.B.A., Miami University; Ph.D., University of North Carolina, Chapel Hill

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**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

**Monczka, Robert M.** (1999). Research Professor of Supply Chain Management; B.A., M.B.A., 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

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**Montiel, Miguel** (1974). Professor 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

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**Moor, William C.** (1968). Associate Professor of Industrial Engineering; B.S., M.S., Washington University; Ph.D., Northwestern University

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Regents' Professor of Chemistry and Biochemistry and Geological Sciences; Director, Center for Meteorite Studies; B.S., Alfred University; Ph.D., California Institute of Technology

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**Moore, Diane B.** (1980). Librarian, Noble Science Reference Services; B.S., College of William and Mary; M.L.S., University of Wisconsin, Madison

**Moore, Elsie Gloria Jean** (1981). Associate 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 Biology; 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, 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

**Moppett, Samantha A.** (1999). Legal Writing Instructor; B.A., Bucknell University; J.D., Suffolk University Law School

**Mor, Tsafir** (2000). Assistant Research Professor of Plant Biology; B.Sc., M.Sc., Ph.D., Hebrew University of Jerusalem (Israel)

**Morgan, Don** (2000). Associate Professor of Exercise Science and Physical Education; 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). Associate Professor of Religious Studies; B.A., Saint Dunstan's University; M.A., Ph.D., University of Maine

**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 Microbiology; Director, Radiation Safety Office; B.S., Wayne State University; M.Ed., University of Maryland, College Park; M.S., Ph.D., University of Tennessee, Knoxville

## ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

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**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). Assistant 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

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**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; Chair, Department of Dance; B.A., Western College; M.A., George Washington University



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**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). Associate Librarian; Assistant Dean, University Libraries Personnel; B.S., M.L.S., University of Illinois; M.B.A., Arizona State University

**Murranka, Patricia A.** (1977). Professor Emerita of Management Communication; B.A., Trenton State College; M.A., Rider College; Ed.D., Utah State University

**Murray, Kimberly** (2000). Faculty Associate of Nursing; B.S., Boston University; M.S., Arizona State University

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**Musacchio, Laura** (1999). Assistant Professor of Planning and Landscape Architecture; B.L.A., M.L.A., State University of New York; Ph.D., Texas A&M University

**Musheno, Michael C.** (1977). Professor of Justice Studies and Public Affairs; B.A., Lycoming College; M.A., Ph.D., American University

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**Muthuswamy, Jitendran** (2000). Assistant Professor of Bioengineering; B.Tech., Indian Institute of Technology (India); M.S., Ph.D., Rensselaer Polytechnic Institute

**Myers, Quin** (1985). Academic Associate, Division of Undergraduate Academic Services; Coordinator, Writing Across the Curriculum; B.S.Ed., Chadron State College; M.A., Arizona State University

**Myhajlenko, Stefan** (1986). Associate Research Scientist and Associate Director, Center for Solid State Electronics Research; Ph.D., University of Manchester, Victoria (United Kingdom)

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## N

**Nagasawa, Richard H.** (1969). Professor 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

**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 Biology; B.S., Eastern Michigan University; B.S., University of Michigan, Ann Arbor; Ph.D., Arizona State University

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**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

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- 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** 1981-89, 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, Lecturer, Division of Undergraduate Academic Services; B.A., Michigan State University; M.S., University of Southern Maine; Ph.D., Brandeis University
- Nelson, Margaret** 1995, Professor of Anthropology; 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 Biology, B.A., Temple University; M.D., George Washington University School of Medicine
- Nering, Fvar D.** 1960, Professor Emeritus of Mathematics and Statistics, B.A., Indiana University, Fort Wayne; M.A., Ph.D., Princeton University
- Neuberg, Steven L.** 1985, Professor of Psychology, A.B., Cornell University; M.S., Ph.D., Carnegie Mellon University
- Neuer, Susanne** 2000, Assistant Research Professor of Biology, B.S., Kiel University, Germany; M.S., University of Washington; Ph.D., Oregon State University
- New, Frances Y.** 1986, Lecturer Emerita; B.S., Seattle Pacific University; M.L.S., University of Arizona
- Newfeld, Stuart J.** 1997, Assistant Professor of Biology, B.S., Hobart College; M.A., M.S., University of Hawaii; Ph.D., Emory University
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- Newport, Mark** 2001, Assistant Professor of Art, B.F.A., Kennesaw State 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 Dock, Michelle** 2000, Assistant Museum Professional, Curator of Education, University Art Museum, B.A., New Mexico State University; M.A., Arizona State University
- Nichols, Renea D.** 1995, Lecturer of Journalism and Mass Communication, B.A., Central Michigan University; M.M.C., Arizona State University
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- Nielsen, Michael J.** 1969, Professor Emeritus of Design, B.P.D., North Carolina State University; Raleigh, M.A., Stanford University
- Niulson, Gregory M.** 1990, Professor of Computer Science and Engineering, B.S., M.S., Ph.D., University of Utah
- Nigam, Bishan Perkash** 1964, Professor Emeritus of Physics and Astronomy, B.S., M.S., University of Delhi, India; Ph.D., University of Rochester
- Nikitin, Sergey** 1994, Associate Professor of Mathematics and Statistics, M.S., Moscow State University; Ph.D., Academy of Science of Russia; Research Institute of System Studies
- Nilsen, Alleen P.** 1975, Professor of English, B.A., Brigham Young University; M.Ed., American University; Ph.D., University of Iowa
- Nilsen, Don L.F.** 1973, Professor of English, B.A., Brigham Young University; M.A., American University; Ph.D., University of Michigan
- Northey, William T.** 1959, Professor Emeritus of Microbiology, B.A., University of Minnesota; Twin Cities, M.A., Ph.D., University of Kansas
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- Noreuil, Chad** 2001, Legal Writing Instructor, B.A., J.D., University of Illinois, Urbana-Champaign
- Norton, Janice** 1998, Senior Lecturer of English, B.A., M.A., University of Tennessee, Knoxville; Ph.D., University of Iowa
- Norton, Kay** 1999, Senior Lecturer of Music, B.M.E., M.F.A., University of Georgia; Ph.D., University of Colorado
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## O

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- O'Day, Peggy A.** 1994, Associate Professor of Geological Sciences, B.S., University of California-Davis; M.S., Cornell University; Ph.D., Stanford University
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- O'Donnell, Ed** (1999), Assistant Professor of Accounting and Information Management, B.B.A., Texas A&M University; Ph.D., University of North Texas, Kingsville
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## P

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## Q

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**Rajan, Subramaniam D.** 1983, Professor of Civil and Environmental Engineering, B.Tech., Indian Institute of Technology, India; M.S., Ph.D., University of Iowa

**Ralston, Mack A.** 1956, Professor Emeritus of Education; B.S., M.S., Indiana State University; Ed.D., Indiana University

**Ramage, John** 1999, Associate Professor of English, B.A., Whitman College, Ph.D., Washington State University

**Ramakrishna, B.L.** 1999, Associate Professor of Plant Biology and Solid State Science, B.Sc., Bangalore University, India; M.Sc., Indian Institute of Technology, Kanpur, India; Ph.D., Indian Institute of Technology, Madras, India

**Rankin, Robert L.** 1971, Associate Professor 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

**Rasmussen, David I.** 1960, Professor Emeritus of Biology, B.S., M.S., University of Utah; Ph.D., University of Michigan

**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 Dean for Research, College of Engineering and Applied Sciences, B.S., M.S., Purdue University, Ph.D., University of Wisconsin, Madison

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- 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** 2011, Assistant Professor of Accountancy and Information Management, B.A., Indian Institute of Technology, India, M.B.A., Indian Institute of Management, India, Ph.D., University of Texas at Austin
- Rawlett, Kristen** 2012, Faculty Assistant of Nursing, B.S., Virginia Commonwealth University; M.S.N., University of South Carolina
- Rawls, J. Alan** 1997, Assistant Professor of Biology, B.S., University of Western Ontario, Canada, Ph.D., Southern Illinois University
- Ray, Timothy E.** 1998, Lecturer of English, B.A., M.A., University of Central Oklahoma; Ph.D., Bowling Green State University
- 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
- Razatos, Anneta** 1999, Assistant Professor of Chemical Engineering, B.S., University of Colorado, Boulder, Ph.D., University of Texas, Austin
- 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 Accounting and Information Management, Director, School of Accounting and Information Management, B.S., Queen's 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, A.B., George College, M.S., Ph.D., Virginia Polytechnic Institute and State University
- Reed, Kaye E.** 1997, Assistant 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, Assistant Professor of Languages and Literatures, B.A., Evergreen State College, M.A., Ph.D., University of Washington
- Reeves, Henry C.** 1969, Professor Emeritus of Microbiology, 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.** 1981, Associate Professor of Accountancy and Information Management, Director, College of Business Honors Program, Associate Dean of Undergraduate Programs, College 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, Fort Collins, Colorado School of Mines; Ph.D., University of Wisconsin, Madison
- Reiser, Mark R.** 1988, Associate Professor of Statistics; 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
- Remson, Lynne Hebert** 1992, Clinical Associate Professor of Speech and Hearing Science, B.A., M.S., University of Southwestern Louisiana
- Renaut, Rosemary** 1987, Professor of Mathematics and Statistics; Director, Computational Bioscience Program, B.S., Durham University; Ph.D., University of Cambridge, United Kingdom
- 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, B.A., City University of New York, M.A., New York University, Ph.D., University of Iowa
- Reyes, Guillermo** 1996, Assistant Professor of Theatre, B.A., University of California, Los Angeles, M.F.A., University of California, San Diego
- 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, 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
- 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.** 2001, Assistant Professor of Plant Biology; 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** 2003, 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, Ross R.** 1950, Professor Emeritus of Political Science; M.A., Ph.D., University of Chicago

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**Richard, Thelma Shinn** (1975). Professor 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 Exercise Science and Physical Education; B.S., Bradley University; M.A., Ed.D., Stanford University

**Richardson, Grant L.** (1953). Professor Emeritus of Agribusiness and Resource Management; B.S., M.S., University of Arizona; Ph.D., Oregon State 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)

**Ridenour, Ronda L.** (1970). Associate Librarian; Team Management, Technical Services Department; B.A., Arizona State University; M.S.L.S., University of Southern California

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**Rikakis, Thanassis** (2001). Professor of Music; Director for Institute for Studies in the Arts; B.A., Ithaca College; M.A., D.M.A., Columbia University

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Regents' Professor of English; B.A., M.F.A.,  
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**Risseuw, John L.** (1980). Professor of Art; B.S., M.A., M.F.A., University of Wisconsin, Madison

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**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

**Rivers, Patrick** (1998). Assistant Professor of Health Administration and Policy; B.A., University of Ghana (Ghana); M.B.A., University of Wisconsin, Madison; Ph.D., University of Alabama

**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, Chell A.** (1989). Associate Professor of Industrial Engineering; B.A., M.S., University of Utah; Ph.D., Virginia Polytechnic Institute and State University

**Roberts, Lauren C.** (1984). Clinical Associate Professor of Clinical Laboratory 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

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**Robertson, Shannon D.** (1998). Assistant Professor of Exercise Science and Physical Education; B.Pe., M.S., McMaster University (Canada); Ph.D., Purdue University

**Robinette, Martin** (2000). Adjunct Professor of Speech and Hearing Science; B.S., M.S., University of Utah; Ph.D., Wayne State University

**Robinson, Brent, SFC** (2001). Instructor of Military Science

**Robinson, Dahlia M.** (2000). Assistant Professor of Accountancy and Information Management; B.S., M.S., University of the West Indies (Barbados); M.S., Pennsylvania State University; Ph.D., University of Georgia

**Robinson, Daniel O.** (1950). Professor Emeritus of Agribusiness and Resource Management; A.B., Brigham Young University; M.S., University of Arizona; Ph.D., Ohio State University

**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

**Rodland, Carol** (2001). Associate Professor of Music; B.M., M.M., The Juilliard School

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- Rodriguez, Ester** 1986, Associate Professor of Nursing, B.S.N., M.S., Ph.D., Arizona State University
- Rody, Joseph** 1994, Senior Lecturer of Mathematics and Statistics, B.S., M.S., University of Akron
- Roe, Sue** 2001, Faculty Assistant 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, College of Engineering and Applied Sciences, 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** 1955, Adjunct Professor of Biology, B.A., Emory University, Ph.D., University of California, San Diego
- Rogers, Rodney** 1957, Professor of Music, B.M., University of Iowa, M.M., Arizona State University; Ph.D., University of Iowa
- Rogerson, Richard** 2011, Resident Professor of Economics, B.Sc., University of Alberta, Canada, Ph.D., University of Minnesota
- Roher, Alex F.** 1997, Adjunct Professor of Biology, M.D., National University of Mexico, School of Medicine, Ph.D., University of Cambridge, United Kingdom
- Rollier, Dwayne A.** 1971, Professor Emeritus of Industrial Engineering, B.S., M.S., Oklahoma State University; Ph.D., Florida State University
- Rollins, George, Major** 2000, Assistant Professor of Military Science, B.A., St. Leo College
- Rolnick, Melissa** 2001, Assistant Professor of Dance, B.F.A., University of New York, M.F.A., Mills College
- Rolstad, Kellie** 1990, 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
- Rook, Fern H.** 1960, Professor Emerita of Biology, B.A., University of Colorado; M.A., Arizona State University
- Roosa, Mark W.** 1955, Professor of Finance and Human Development, B.S., Ohio State University; M.A., Ph.D., Michigan State University
- Roper, Devon J.** 1988, Professor Emeritus of Aeronautical Manufacturing Technology, B.S., Utah State University; M.S., Arizona State University
- Rosa, John P.** 2001, Assistant Professor of Asia Pacific American Studies, B.A., Northwestern University; M.A., Ph.D., University of California, Irvine
- Rosales, F. Arturo** 1981, Professor of History, B.A., Arizona State University; M.A., Stanford University; Ph.D., Indiana University, Bloomington
- Rosdahl, Dana** 1994, Instructor of Nursing, B.S.N., Montana State University; M.S., Arizona State University
- Rose, Jonathan** 1968, Professor of Law, B.A., University of Pennsylvania; L.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, Institutional Professorial 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 Juillard School
- Rosier, Kathlene** 2001, Director, Indian Legal Program, B.A., Capital University; J.D., University of Utah
- 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 Women's Studies and History, Interim Director, Interdisciplinary Humanities Program, B.A., M.A., Ph.D., University of Washington
- Rothstein, Paul** 1998, Assistant Professor of Design, B.F.A., University of Wisconsin Stout; M.Ed., Illinois Institute of Technology
- Rotondi, Michael** 1990, Professor of Architecture, Director, Southern California Institute of Architecture
- Rountree Antar, Michele** 1999, Assistant Coordinator of Field Education, B.A., University of Arizona; M.S.W., Boston University
- Roussinov, Dmitri** 2001, Assistant Professor of Accounting and Information Management, 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 Accounting and Information Management, B.S., Northern Arizona University; M.S., San Diego State University; Ph.D., University of Pittsburgh
- Rowe, Kenneth L.** 1967, Professor Emeritus of Marketing, B.A., M.A., Northern Iowa University; Ph.D., Michigan State University
- Roy, Asim** 1985, Professor of Computer Information Systems, B.E., Calcutta University, India; M.S., Case Western Reserve University; Ph.D., University of Texas, Austin
- Roy, Radha R.** 1963, Professor Emeritus of Physics and Astronomy, B.S., M.S., University of Calcutta, India; Ph.D., University of London, United Kingdom
- 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
- Rubarth, Lorraine B.** 2001, Faculty Assistant of Nursing; B.S.N., Grand Valley State University; M.S.N., Wayne State University
- Ruch, William A.** 1968, Professor Emeritus of Management, B.S., M.B.A., D.B.A., Indiana University, Bloomington
- Rucker, Robert** 1956, Professor Emeritus of Industrial Engineering, B.S., M.S., University of Miami; M.S., Ph.D., Arizona State University
- Rudolph, Robert A., Maj.** 1900, Assistant Professor of Military Science, B.A., Arizona State University
- Ruedemann, Richard** 1991, Lecturer of Mathematics and Statistics, B.S., M.A., Arizona State University; Ph.D., University of South Florida
- Rummel, John R.** 1975, Professor Emeritus of Architecture, B.A., M.S., Stanford University
- Rund, James A.** 2001, Assistant Professor of Educational Leadership and Policy Studies, Associate Vice President, Student Affairs, B.A., Morehead State University; M.S., North Dakota State University; Ed.D., Arizona State University

## ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

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**Rungtusanatham, Manus (Johnny)** (1998). Associate Professor of Management; B.S., Birmingham-Southern College; Ph.D., University of Minnesota

**Ruppé, Carol V.** (1962). Librarian Emerita; B.A., University of New Mexico; M.A., University of Denver

**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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Regents' Professor of Psychology; B.A., University of California, Davis; Ph.D., Cornell University

**Russomanno, Joseph A.** (1994). Associate Professor of Journalism and Mass Communication; B.A., University of Colorado, Denver; M.A., University of Missouri, Columbia; Ph.D., University of Colorado

**Rutherford, Robert B. Jr.** (1976). Professor of Curriculum and Instruction; Director, Interdisciplinary Ph.D. Program in Curriculum and Instruction; Associate Director, Research and Graduate Education; B.S., M.Ed., University of Virginia; Ed.S., Ph.D., Vanderbilt University

**Rutowski, Ronald L.** (1976). Professor of Biology; B.A., University of California, Santa Cruz; Ph.D., Cornell University

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## S

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**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

**Sabo, John S.** (2001). Assistant Professor of Biology; B.S., University of Notre Dame; M.S., University of Washington; Ph.D., University of California, Berkeley

**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; Interim Chair, Department 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

**Salmirs, Seymour** (1981). Professor Emeritus of Technology; B.A.E., M.S.A.E., Georgia Institute of Technology

**Saltz, Charlene** (2000). Academic Associate, Center for Environmental Studies; Environmental Education Coordinator; B.A., Emory University; M.S., Antioch New England Graduate School

**Salvatore, Joseph Raphael** (1998). Adjunct Faculty of Microbiology; M.D., Universidad Autónoma de Guadalajara (Mexico)

**Salvucci, Michael E.** (1995). Adjunct Faculty of Plant Biology; 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, University Complutense (Spain); M.A., University of Minnesota, Twin Cities; Ph.D., University of Minnesota, Minneapolis

**Sanders, Bevie T.** (1957). Professor Emeritus of Accountancy and Information Management; B.B.A., North Texas State University; M.S., Texas A&M University; Ph.D., University of Texas; C.P.A., Arizona, Texas

**Sandler, Irwin** (1970). Professor of Psychology; B.A., Brooklyn College; Ph.D., University of Rochester

**Sands, Kathleen M.** (1977). Professor of English; B.A., Fort Wright College of the Holy Names; M.A., Ph.D., University of Arizona

**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

**Santello, Marco** (1999). Assistant Professor of Exercise Science and Physical Education; B.Sc., Higher Institute of Physical Education (Italy); M.Phil., Ph.D., University of Birmingham (United Kingdom)

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- Santos, Manuel** 1999 Professor of Economics, Licenciatura Autónoma Universidad de Madrid Spain; M.A. Ph.D. University of Chicago
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- Sargent, Charles S. Jr.** 1991 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.** 1967 Professor Emeritus of Chemical Engineering; B.S., C.E., M.S., C.I.E., Ph.D., Illinois Institute of Technology
- Satterlie, Richard A.** 1980 Professor of Biology; B.A. Sonoma State University; Ph.D., University of California Santa Barbara
- Satterthwaite, Lester L. Jr.** 1965 Professor Emeritus of Educational Media and Computers; B.S., M.S., Ed.D., Indiana University, Bloomington
- Sattler, Howard F.** 1966 Professor Emeritus of Education; B.S. M.S. Ph.D., Arizona State University
- Saubolle, Michael** 1983 Adjunct Faculty of Microbiology; B.S. Ph.D., University of California, Davis
- Saunders, Melissa** 2001 Faculty Associate of Nursing; B.S.N., M.S. Arizona State University
- 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.** 1995 Adjunct Professor of Anthropology; B.A. Cincinnati Bible Seminary; M.A., University of South Carolina; Ph.D., Arizona State University
- Savard, Jeanne A.** 1991 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; B.A., University of Washington; M.Ed. Ph.D., Arizona State University
- Sawhney, Anil** 1999 Associate Professor of Construction; B.S.E. Institute of Engineers India; M.S., School of Planning and Architecture India; Ph.D. University of Alberta, Canada
- Sayles, Judy** 1999 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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