

## UNDERGRADUATE PROGRAMS

### Minors (Program Descriptions and Requirements)

#### African American Studies (Minor) LAAFRMIN

*Description:* The African and African American Studies Program offers an interdisciplinary examination of the many ways in which African and African-descended peoples have created robust lives for themselves and, in turn, contributed to the creation of the modern world.

The program's mission is advanced by its core undergraduate curriculum and certificate and minor programs that examine the culture, arts, history, politics, economics and current status of African Americans, Africans and the African Diaspora everywhere, especially in the Caribbean, Central America, and South America.

The curriculum combines a research-based understanding of the humanities, social and behavioral sciences and the arts with practical applications (internships, community/civic engagement and research projects) to prepare students for lifelong learning, advanced study in a variety of fields and successful careers and productive public service in an increasingly diverse society, especially in Arizona.

*Program Requirement:* The minor requires 18 semester hours. All African and African American Studies minors must take the following six core hours:

AFH 300 Precolonial Africa (3)

AFS 200 Introduction to African and African Diaspora Studies (3)

Choose one of the following regional courses (3)

AFH 319 Black Experience in Latin America (3)

AFR 210 Introduction to African American Studies C (3)

AFS 340 The Making of Modern Africa (3)

AFS 355 Democracy and Civil Society in Africa (3)

Related courses\* (9)

\* Nine semester hours are required, with one 300 or 400 level course from each of the following thematic areas: Culture and Literature; Politics and Governance; and Family, Gender, and Society. At least 50 percent of the course content (which may be AFH or AFS) must deal with African peoples inside and outside the African continent. At least nine of the 18 semester hours in this minor must be completed at ASU.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if (1) the

college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met and (2) the college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major.

*Contact Information:*

School of Social Transformation  
<http://www.asu.edu/clas/afamstu/>  
afamstu@asu.edu  
WILSN 140  
480/965-4399

**Aging and Lifespan Development (Minor) HSALDMIN**

*Description:* The minor in aging and lifespan development is available to any ASU undergraduate students who wish to have knowledge of aging-related issues that may help them in their career or personal lives. Students pursuing the minor will have the opportunity to learn about the specific and often unique needs of older adults and their families, and the impact on social institutions. Students majoring in areas such as business, criminal justice, recreation and tourism, finance, political science, social work, marketing, architecture, rehabilitation therapy and many other programs may find the aging and lifespan development minor a competitive advantage for career development.

*Program Requirement:* The minor is 18 credits (six courses), consisting of one required overview course (ALD 101), one "core" course (ALD 420, PGS 427 or ALD 440), and four elective courses (which may include any of the core courses not used as the core).

Please note that all courses except ALD 101 are offered online. The courses offered include:

- ALD 101 Introduction to Aging Issues Across the Lifespan
- ALD 303 Aging, Lifespan Development, and the Family
- ALD 404 Sexuality and Aging
- ALD 420 Health Aspects of Aging
- ALD 431 Caregiving for Older Adults

ALD 440 Social Policy Issues in Midlife and Beyond

ALD 460 Alzheimer's and Related Dementias

ALD 474 Women, Aging, and the Life Course

ALD 484 Internship (requires permission)

ALD 494 Special Topics:

- Elder Abuse
- Diversity in Aging
- Mental Health and Aging
- Spirituality
- Others, as approved by the department

SOC 353 Death and Dying

CMN 417 Communication and Aging

PGS 427 Psychology of Aging

RTM 450 Leisure and Aging

*Contact Information:*

School of Aging and Lifespan Development

<http://sald.asu.edu/>

FAB 115A

602/543-6642

**American Indian Studies (Minor) LAAISMIN**

*Description:* 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.

*Program Requirement:* Fifteen credit hours are required, including AIS 180, 285 and 380 and six elective credit hours from either of 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 the Tempe campus.

Students must receive a minimum grade of "C" (2.00) for all courses in the minor and meet all course eligibility requirements.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.

2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

American Indian Studies Program  
<http://americanindian.clas.asu.edu/>  
AIS@asu.edu  
DHALL 356  
480/727-7056

**American Studies (Minor) ASAMSMIN**

*Description:* The minor in American studies offers students the opportunity to pursue an interest in the interdisciplinary study of American culture. This interdisciplinary minor is particularly appropriate for students majoring in one of the humanities or social sciences disciplines.

*Program Requirement:* The minor consists of 18 credit hours, 12 of which must be upper-division hours:

The following courses are required (6):

AMS 301 Introduction to American Studies, L (3)  
AMS 330 Introduction to American Lives, HU (3)

Choose from the following combinations (6):

AMS 310 History of American Systems to 1865, L, C, H (3)  
AMS 311 History of American Systems since 1865, H (3)

--- or ---

AMS 320 American Cultural History I, SB, H (3)  
AMS 321 American Cultural History II, SB, H (3)

## Supporting Courses (6)

Two courses with substantial American content that must be approved by the American studies faculty advisor.

*Enrollment Requirements:* Students wishing to pursue the American studies minor should consult an academic advisor in the unit offering that minor to ensure that the appropriate set of courses is taken, to sign the minor check sheet, and to have the minor added to their program of study. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major recognizes the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

### *Contact Information:*

Division of Humanities, Arts, and Cultural Studies

[http://newcollege.asu.edu/programs/amer\\_studies/minor\\_certs/index.shtml](http://newcollege.asu.edu/programs/amer_studies/minor_certs/index.shtml)

harcs.dept@asu.edu

FAB N290

602/543-4444

## **Anthropology (Minor) LAASBMIN**

*Description:* The minor in anthropology provides students with a great deal of flexibility in selecting courses. The program has been designed to allow students to focus on areas within the discipline that articulate well with their major. All students interested in the anthropology minor are encouraged to discuss the options available with a School of Human Evolution and Social Change undergraduate advisor.

*Program Requirement:* The anthropology minor requires a minimum of 18 credit hours.

Two of the introductory courses—from ASB 102, ASM 104 and ASB 222 or 223—are required. However, the particular introductory courses selected may limit the anthropology courses available in the upper division.

Twelve credit hours must be upper-division and represent at least two of the three subfields of anthropology.

The three subfields are:

1. Sociocultural anthropology (with linguistics).

2. Archaeology.
3. Physical anthropology.

The courses chosen to represent two of the three subfields must be drawn from the distribution requirements of those two subfields.

A minimum grade of "C" (2.00) is required for all courses taken for the minor in anthropology.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

School of Human Evolution & Social Change  
<http://shesc.asu.edu/degree-ug>  
shesc@asu.edu  
SHESC 233  
480/965-6215

**Applied Biological Sciences (Minor) TSABSMIN**

*Description:* The Department of Applied Biological Sciences offers rigorous and practical programs in applications of the biological sciences. Consistent with a polytechnic vision, programs involve extensive student interaction with faculty through experience-based learning activities, including laboratories, field trips, internships and faculty-guided research and service-learning projects. Mastery of fundamental biological principles is emphasized through quality learning in the classroom and hands-on activities in laboratories and in the living laboratories of

the Sonoran desert and surrounding ecosystems (as well as the landscape of the greater Phoenix area).

*Program Requirement:* The applied biological sciences minor consists of 24 credit hours, including BIO 187 General Biology I and BIO 188 General Biology II, and at least 15 hours selected with the approval of an advisor; at least 12 hours must be in upper-division courses offered by the Department of Applied Biological Sciences.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information:

[http://www.poly.asu.edu/saas/appliedbiologicalsciences/abs\\_minor.html](http://www.poly.asu.edu/saas/appliedbiologicalsciences/abs_minor.html).

*Contact Information:*

Department of Applied Biological Sciences  
[http://www.poly.asu.edu/saas/appliedbiologicalsciences/  
appliedbiologicalscience@asu.edu](http://www.poly.asu.edu/saas/appliedbiologicalsciences/appliedbiologicalscience@asu.edu)  
WANER 340  
480/727-1444

### **Applied Psychology (Minor) ECPSYMIN**

*Description:* Applied psychology offers a traditional psychology core curriculum with emphasis on human factors, human-computer interaction, aviation or manufacturing.

*Program Requirement:* This minor in applied psychology consists of 22 credit hours with at least 12 being upper-division courses. The following are required courses that must be completed with a grade of "C" (2.00) or higher:

PGS 101 Introduction to Psychology, SB (3)  
PSY 230 Introduction to Statistics, CS (3) (or equivalent statistics course)  
PSY 290 Research Methods, L/SG (4)  
PSY 437 Human Factors, L (3) or PSY 438 Human-Computer Interaction\* (3)  
or PSY 440 Industrial/Organizational Psychology\* (3)

Additional hours of upper-division PSY and/or PGS courses (9). A maximum of three credit hours from the following courses can be used to satisfy this minor requirement:

PGS 399 Supervised Research (3)  
PGS 499 Individualized Instruction (3) or PSY 499 Individualized Instruction (3)  
PSY 492 Honors Directed Study (3)

Note: A minimum of three classes (two of which are in the upper division) must be taken in residence at ASU.

\*This PSY course is offered only at the Polytechnic campus. All other PSY courses listed above are offered at the Polytechnic and Tempe campuses.

*Enrollment Requirements:* Please contact the department for more information:  
<http://www.poly.asu.edu/saas/minors/>.

*Contact Information:*  
Faculty of Applied Psychology  
<http://www.poly.asu.edu/saas/appliedpsych/>  
SAAS@asu.edu  
SANCA 150  
480/727-1177

### **Architectural Studies (Minor) ARSTDMIN**

*Description:* The architectural studies minor is available to nonarchitecture majors interested in this field who wish to pursue another major. The courses are designed to provide an overview of architecture throughout history while focusing on architectural design, with the intention to explore the process of design thinking.

*Program Requirement:* A minimum of 18 credit hours (to include six credit hours of upper-division course work) are required for the minor.

Required Courses (12 credit hours)

ALA 100 Introduction to Environmental Design, HU, G, H (3)  
ALA 102 Architecture, Landscape Architecture, and Society, G (3)  
APH 213 History of Architecture I, L/HU, G, H (3)  
APH 214 History of Architecture II, L/HU, G, H (3)

Six additional credit hours of electives in the architectural history and theory concentration must be selected from the following list for a total of 18 credit hours, of which 12 hours must be taken at the 300 or 400 level:

ANP 494 Special Topics (1-3)  
APH 305 Contemporary Architecture (3)  
APH 394 Special Topics (3)  
APH 414 History of the City, H (3)  
APH 441 Ancient Architecture (3)  
APH 444 Baroque Architecture (3)  
APH 446 20th-Century Architecture I, HU (3)  
APH 447 20th-Century Architecture II, HU (3)  
APH 494 Culture of Place, C (3)  
APH 494 Special Topics (3)  
APH 499 Individualized Instruction\* (3)  
APH 511 Energy Environmental Theory (3)  
APH 598 Special Topics (3)  
ARP 451 Architectural Field Studies (6)  
ATE 494 Special Topics (3)  
ATE 598 Special Topics (3)

\* These courses require a petition to the School of Architecture and Landscape Architecture.

A minimum GPA of 2.50 in minor courses is required to earn the minor in architectural studies. In addition, students may not use a core course to count toward the minor. Students pursuing the B.S. in landscape architecture must petition the school to request a substitution for any core courses that are also included in the architectural studies minor.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either

by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major.

*Contact Information:*

School of Architecture and Landscape Architecture  
<http://design.asu.edu/sala/index.shtml>  
design.advising@asu.edu  
DS (DESIGN SOUTH) 101  
480/965-3536

**Art History (Minor) FAARTHMIN**

*Description:* The art history minor is designed for those students who are interested in a broad introduction to the study of the history of art. In giving a broad chronological exposure to the history of art from diverse cultures, the minor strengthens academic preparation and provides students with many options to select courses based on their individual interests.

*Program Requirement:* The School of Art offers a minor in art history consisting of 18 credit hours of course work, including 12 upper-division electives. A minimum grade of "C" (2.00) is required in all classes in the minor. For those pursuing a minor, a minimum overall GPA of "C" (2.00) is required. Courses may not be double counted in a major and the minor, and a minimum of 12 credit hours of resident credit at the Tempe campus are required.

ARS 100 or 300 may be used toward a minor. ARS 100 and 300 may not be used toward an art history minor if the student is an art major or has credit in ARS 101 and 102.

**Required Courses**

Select two of the following courses:

ARS 101 Art from Prehistory Through Middle Ages, HU, H (3)

ARS 102 Art from Renaissance to Present, HU, H (3)

or

ARS 201 Art of Asia, HU, G, H (3)

ARS 202 Art of Africa, Oceania and the Americas, HU, G, H (3)

**Elective Courses**

Students pursuing an art history minor select four three-credit-hour, upper-division courses. A seminar is strongly recommended for those considering graduate study.

Students need to be aware of lower-division prerequisites for all upper-division

courses. Interested students should contact the School of Art for specific requirements and admission procedures.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if, 1) the college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met, and 2) the college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor. Please contact the department for more information.

Note: certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major.

*Contact Information:*

School of Art  
<http://art.asu.edu>  
ART 102  
480/965-3468

### **Asian Languages - Chinese (Minor) LACHIMIN**

*Description:* Students pursuing a minor in Asian languages-Chinese gain an understanding of the language, literature and cultures of China. There are opportunities to partake in study abroad programs, which can serve to enhance a student's minor experience and education.

*Program Requirement:* The minor in Asian languages (Chinese) consists of 18 credit hours, of which 12 credit hours must be at the upper division. Required courses are:

- Up to six credit hours of 200-level Chinese.
- CHI 301 Third-Year Chinese I (5).
- CHI 302 Third-Year Chinese II (5).
- Two credit hours of CHI course work chosen in consultation with the advisor in the School of International Letters and Cultures.

Course substitutions are allowed for heritage and advanced speakers of the language.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

School of International Letters and Cultures  
<http://silc.asu.edu/undergraduate/majors-minors-certs>  
silcadvising@asu.edu  
LL 440  
480/965-6281

**Asian Languages - Japanese (Minor) LAJPNMIN**

*Description:* Students pursuing a minor in Asian languages-Japanese gain an understanding of the language, literature, and cultures of Japan. There are opportunities to partake in study abroad programs, which can serve to enhance a student's minor experience and education.

*Program Requirement:* The minor in Asian languages (Japanese) consists of 18 credit hours, of which 12 credit hours must be at the upper division. Required courses are:

- Up to six credit hours in 200-level JPN courses.
- JPN 313 Third-Year Japanese I, G (3).
- JPN 314 Third-Year Japanese II, G (3).
- Six credit hours of additional upper-division JPN courses chosen in consultation with a School of International Letters and Cultures advisor.

Course substitutions are allowed for heritage and advanced speakers of the language.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

School of International Letters and Cultures  
<http://silc.asu.edu/undergraduate/majors-minors-certs>  
silcadvising@asu.edu  
LL 440  
480/965-6281

**Astronomy (Minor) LAASTMIN**

*Description:* The astronomy minor is designed for students interested in developing a basic understanding of astronomy and astrophysics and analyzing issues through a scientific viewpoint. A minimum of 24 hours of AST and related courses are required, including 4 hours of upper-division electives to be chosen after consultation with an academic advisor.

*Program Requirement:* The minor in astronomy consists of a minimum of 24 credit hours. At least 12 credit hours must be in upper-division courses. Required courses:

- AST 113 Astronomy Laboratory I, SQ (1)\*
- AST 114 Astronomy Laboratory II, SQ (1)\*\*
- AST 321 Introduction to Planetary and Stellar Astrophysics, SQ (3)\*
- AST 322 Introduction to Galactic and Extragalactic Astrophysics, SQ (3)\*\*

Choose between the course combinations below:

PHY 150 Physics I, SQ (4) or  
PHY 121 University Physics I: Mechanics, SQ (3)\*\*\* and PHY 122 University  
Physics Laboratory I SQ (1)\*\*\*

and

PHY 151 Physics II, SQ (4) or  
PHY 131 University Physics II: Electricity and Magnetism, SQ (3)\*\*\*\* and PHY  
132 University Physics Laboratory II SQ (1)\*\*\*\*

or

PHY 252 Physics III, SQ (4)

Eight credit hours of electives are chosen with approval of an astronomy advisor  
from upper division courses in physics and astronomy.

\*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.

*Enrollment Requirements:* Students in most majors may pursue one or more minors  
and, upon successful completion of the prescribed course work, have that  
accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through  
established verification procedures, that all requirements for the minor have  
been met.
2. The college (and, in certain colleges, the department) of the student's major  
allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in  
the unit offering that minor to ensure that an appropriate set of courses is taken.  
The student should also consult with an academic advisor in the college or  
department of his or her major to make sure the college or department of the major  
allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either  
by the college or department of the major or minor. Inappropriate combinations  
include (but are not limited to) ones in which an excessive number of courses in the  
minor are simultaneously being used to fulfill requirements of the student's major.  
Please contact the department for more information: <http://sese.asu.edu/students>.

*Contact Information:*  
Department of Physics  
<http://sese.asu.edu>  
[seseinfo@asu.edu](mailto:seseinfo@asu.edu)

PS F686  
480/965-5081

### **Biochemistry (Minor) LABCHMIN**

*Description:* The biochemistry minor is designed to give students majoring in other disciplines a solid grounding in the basics of biochemistry in order to complement their major degree. It is especially appropriate for majors in the various disciplines of life sciences, physics, engineering and geology, and for students planning careers in medical disciplines.

*Program Requirement:* A minor in biochemistry is awarded to students who complete 25 credit hours in the following required courses:

BCH 461 General Biochemistry (3)  
BCH 462 General Biochemistry (3)  
CHM 113 General Chemistry I, SQ (4)  
CHM 116 General Chemistry II, SQ (4)  
CHM 233 General Organic Chemistry I (3)  
CHM 234 General Organic Chemistry II (3)  
CHM 237 General Organic Chemistry Laboratory I (1)  
CHM 238 General Organic Chemistry Laboratory II (1)  
CHM 341 Elementary Physical Chemistry (3) or CHM 345 Physical Chemistry I (3)

A minimum grade of "C" (2.00) is required for each of the courses. A minimum of 12 upper division credit hours are required to complete this minor.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met, and
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

*Note:* Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major.

Please contact the department for more information:  
<http://chemistry.asu.edu/undergrad/programIntro.asp>.

*Contact Information:*

Department of Chemistry and Biochemistry  
<http://chemistry.asu.edu>  
chmugadv@asu.edu  
PS D102  
480/965-3461

**Biological Sciences (Minor) LABIOMIN**

*Description:* Biological sciences encompasses the study of all living things and includes the study of basic organization and function, how organisms evolve, their roles in the natural environment, how hereditary information is transferred and the development of biotechnology. The minor in biological sciences gives students a flexible curriculum that may be tailored to their interests.

*Program Requirement:* The minor consists of 24 credit hours, including BIO 187 General Biology I and BIO 188 General Biology II. The following courses taken together may be substituted for BIO 187 or 188:

PLB 200 Biology of Plants and PLB 201 Biology of Plants Laboratory or  
MIC 206 Microbiology Laboratory and MIC 220 Biology of Microorganisms

Alternatively, MBB 245 Cellular and Molecular Biology may be substituted for BIO 188.

The remaining 16 hours are selected by the student with the approval of an advisor. At least 12 of these 16 hours must be in upper-division courses in the life sciences. Courses that are not available for credit in the life science majors cannot be used for the minor (e.g., BIO 100 The Living World, BIO 201 Human Anatomy and Physiology I).

Any one of these combinations of courses may be taken to fulfill the remaining credit hour requirements:

BIO 187 and BIO 188  
BIO 187 and PLB 200 and 201  
BIO 188 and PLB 200 and 201  
BIO 187 and MIC 206 and 220  
BIO 188 and MIC 206 and 220  
BIO 187 and MBB 245

*Enrollment Requirements:* This minor is not available to students majoring in the life sciences. Students in most majors may pursue one or more minors and, upon

successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information:  
[http://sols.asu.edu/ugrad/degree\\_prog/index.php](http://sols.asu.edu/ugrad/degree_prog/index.php).

*Contact Information:*  
School of Life Science  
<http://sols.asu.edu/>  
[sols.advising@asu.edu](mailto:sols.advising@asu.edu)  
LSC 206  
480/727-6277

### **Business (Minor) BABUSMIN**

*Description:* A minor in business is available to students across the university interested in business courses but who wish to pursue majors in other colleges. The business minor includes a strong business foundation covering a topics that are important to managers such as accounting, computer information systems, economics, finance, management and marketing.

*Program Requirement:* Students must complete 36 credit hours of the specified business courses with a grade of "C" (2.00) or higher in each course. Six of the 12 upper-division credit hours must be resident credit. The upper-division courses specified for the minor will be restricted to students with 56 earned credit hours, a minimum 2.50 ASU cumulative GPA and course prerequisite requirements met. Business students are not eligible to apply for the minor.

### **Lower-Division Courses (24 hours)**

ACC 231 Uses of Accounting Information I or ACC 303 Honors Financial Accounting  
ACC 241 Uses of Accounting Information II  
CIS 105 Computer Applications and Information Technology or other approved computer science/information course  
ECN 211 Macroeconomic Principles  
ECN 212 Microeconomic Principles  
ECN 221 Business Statistics (or other approved statistics course)  
MAT 210 Brief Calculus or MAT 270 Calculus with Analytical Geometry I  
MAT 211 Mathematics for Business Analysis or MAT 271 Calculus with Analytical Geometry II

**Upper-Division Courses** (12 credit hours, six of which must be taken from the W. P. Carey School of Business)

FIN 300 Fundamentals of Finance or FIN 302 Managerial Finance or FIN 303 Honors Finance  
MGT 300 Organization and Management Leadership or MGT 303 Honor Organizational Strategies, Leadership and Behavior  
MKT 300 Marketing and Business Performance or MKT 302 Applied Marketing Management and Leadership or MKT 303 Honors Marketing Theory and Practice  
SCM 300 Global Supply Operations or SCM 303 Honors Global Supply Chain Operations

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if the college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met, and the college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

Dean, W. P. Carey School of Business

<https://wpcarey.asu.edu/undergraduate/current-students/academics/business-minor-2007.cfm>

wpcareyug@asu.edu

BA 109

480/965-4227

### Chemistry (Minor) LACHMMIN

*Description:* The chemistry minor is designed to give students majoring in other disciplines a solid grounding in the basics of chemistry in order to complement their major degree. It is especially appropriate for majors in the various disciplines of physics, materials science, geology, engineering and life sciences.

*Program Requirement:* A minor in chemistry is awarded to students who complete a minimum 24 credit hours. The following courses are required:

CHM 113 General Chemistry I, SQ (4)  
CHM 116 General Chemistry II, SQ (4)  
CHM 325 Analytical Chemistry (3)  
CHM 326 Analytical Chemistry Laboratory (1)

Choose between the course combinations (8 credit hours):

BCH 361 Principles of Biochemistry (3)  
BCH 367 Elementary Biochemistry Laboratory (1)  
CHM 231 Elementary Organic Chemistry, SQ (3)  
CHM 235 Elementary Organic Chemistry Laboratory, SQ (1)

--- or ---

CHM 233 General Organic Chemistry I (3)  
CHM 234 General Organic Chemistry II (3)  
CHM 237 General Organic Chemistry Laboratory I (1)  
CHM 238 General Organic Chemistry Laboratory II (1)

Choose between the course combinations below (4 or 8 credit hours):

CHM 341 Elementary Physical Chemistry (3)  
CHM 343 Physical Chemistry Laboratory (1)

--- or ---

CHM 345 Physical Chemistry I (3)  
CHM 346 Physical Chemistry II (3)  
CHM 348 Physical Chemistry Laboratory I (1)  
CHM 349 Physical Chemistry Laboratory II (1)

A minimum grade of "C" (2.00) is required for each of the courses in the minor. A minimum of 12 upper division credit hours are required to complete this minor.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information:  
<http://chemistry.asu.edu/undergrad/programIntro.asp>.

*Contact Information:*

Department of Chemistry and Biochemistry  
<http://chemistry.asu.edu>  
[chmugadv@asu.edu](mailto:chmugadv@asu.edu)  
PS D102  
480/965-3461

**Chemistry (Minor) ASCHMMIN**

Program information not available at time of publication.

*Contact Information:*

New College of Interdisciplinary Arts and Sciences  
<http://www.newcollege.asu.edu/>

**Communication (Minor) LACOMMIN**

*Description:* The minor in communication focuses on teaching students how communication processes create, maintain and transform identities, relationships, workplaces and communities.

Our mission statement is, "through the study and critique of human communication, we generate knowledge, creativity and understanding to facilitate healthy

relationships and workplaces, civil and secure communities and constructive intercultural interaction.”

*Program Requirement:* The minor in communication consists of 18 credit hours of courses:

COM 100 Introduction to Human Communication (3)

COM 225 Public Speaking (3) or COM 259 Communication in Business and the Professions (3)

Two of the following courses (6):

COM 310 Relational Communication (3)

COM 312 Communication, Conflict, and Negotiation (3)

COM 316 Gender and Communication (3)

COM 323 Communication Approaches to Popular Culture (3)

Two upper-division-related courses in Global Studies, Asian Pacific American Studies, African and African American Studies, Chicana/Chicano Studies or American Indian Studies (6)

Nine of the 18 credit hours must be Tempe campus resident credits. No pass/fail, Y credit or credit/no-credit courses are allowed. Communication courses required for one's major may not also count for the minor. All prerequisite and GPA requirements must be met. The “C” (2.00) minimum grade requirement must be met for each class.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information:  
<http://www.asu.edu/clas/communication/undergraduate/programinfo/minor/>.

*Contact Information:*

Hugh Downs School of Human Communication  
<http://humancommunication.clas.asu.edu/>  
communication@asu.edu  
STA 412  
480/965-5095

**Communication Studies (Minor) HSCMNMIN**

*Description:* The communication studies minor offers students the opportunity to understand the role and function of communication in various cultural, public, organizational and relational contexts. The program offers a variety of courses and is designed for students majoring in another field. A maximum of six credit hours are allowed from lower-division course work.

*Program Requirement:* The minor consists of 18 credit hours of communication studies courses. Students wishing to pursue a minor must meet with a communication studies faculty advisor to construct a minor that reflects a particular area of specialty and interest. At least 12 credit hours must come from upper-division courses. To graduate with the minor, students must earn a minimum cumulative GPA of 2.00 in communication studies courses. All courses must be passed with a minimum grade of "C" (2.00).

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

Division of Social and Behavioral Sciences - W

[http://newcollege.asu.edu/programs/comm\\_studies/minor/](http://newcollege.asu.edu/programs/comm_studies/minor/)  
SBS.Dept@asu.edu  
FAB N251  
602/543-6058

### **Computational Mathematical Sciences (Minor) LACMSMIN**

*Description:* The computational mathematical sciences curriculum strives to provide students with a background in computer science and the natural or physical sciences in addition to a core of course work in mathematics.

*Program Requirement:* The minor in computational mathematical sciences consists of a minimum of 18 credit hours. Required courses are the following, for a total of 18-20 credit hours:

MAT 271 Calculus with Analytic Geometry II MA (4) or MAT 266 Calculus for Engineers II (3)  
MAT 272 Calculus with Analytic Geometry III MA (4) or MAT 267 Calculus for Engineers III (3)  
MAT 342 Linear Algebra (3) or MAT 343 Applied Linear Algebra (3)  
MAT 420 Scientific Computing (3)  
MAT 421 Applied Computational Methods CS (3)  
MAT 423 Numerical Analysis I CS (3) or MAT 425 Numerical Analysis II CS (3)

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information and see <http://math.asu.edu/undergraduate/degrees.html>.

*Contact Information:*

School of Mathematical and Statistical Sciences

<http://math.asu.edu/>

math@asu.edu

PSA 211

480/965-7195

**Dance (Minor) FADANMIN**

*Description:* The School of Dance provides a dynamic and culturally diverse learning environment where students develop their creativity as artists, scholars and educators. The interdisciplinary curriculum promotes creative collaboration and a holistic approach to acquiring skills for successful career transitions. Movement practices, performance and creativity define the core of the program, and the rich educational experience is further enhanced by studies in:

- Dance cultures.
- Dance history.
- Digital media.
- Movement science.
- Music.
- Philosophy and criticism.
- Somatics.
- Stage and screen production.

*Program Requirement:* The school offers a minor in dance consisting of 18 credit hours of course work, including twelve upper-division hours. A minimum grade of "C" (2.00) or higher is required in all courses that fulfill the dance minor. Students must maintain an overall cumulative GPA of "B" (3.00) or higher for dance minor courses.

**Dance minor requirements**

Choose one from the following courses, for a total of three credit hours:

DCE 100 Introduction to Dance, G

DCE 201 Dance, Culture, and Global Context, HU, G

Choose one from the following courses, for a total of three credit hours:

DAH/DCE 301 Philosophy and Criticism of Dance, L, HU

DAH/DCE 302 Cross-Cultural Dance Studies, L, HU, G

DAH/DCE 401 Dance History, HU

Choose two from the following courses, for a total of four credit hours:

DAN/DCE 130 Dance  
DCE 194 Special Topics\*  
DCE 294 Special Topics\*  
DCE 394 Special Topics\*

Choose eight credit hours of upper-division dance electives in topics such as:

- Argentine Tango
- Ballet
- Capoeira
- Country Western
- Dances of Africa
- Dances of India
- Hip Hop
- Jazz
- Latin Salsa
- Latin/Swing/Ballroom
- Modern
- Oriental/Belly Dancing
- Pilates/Yoga
- Tai Chi

For more information, contact the Herberger Student Academic Services office.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if, 1) the college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met, and 2) the college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*  
School of Dance T

<http://dance.asu.edu/>  
PEBE 107A  
480/965-1891

### **Design Studies (Minor) ARDSNMIN**

*Description:* Students interested in design can earn a minor in design studies. The courses may also appeal to students who wish to pursue the study of design within the B.I.S.

*Program Requirement:* Courses selected must satisfy the minimum requirement of 18 credit hours for the minor. Twelve of the credit hours must be in 300- or 400-level course work. To enhance understanding of the subject matter, some of the designated courses are sequential in nature and require certain prerequisites. Consequently, students should carefully note the semester in which these particular courses are offered. All designated courses for the minor in design studies are lecture courses. To pursue the minor in design studies, students must have a minimum cumulative GPA of 2.50.

#### Designated Courses for the Minor

##### Architecture and Landscape Architecture:

ALA 100 Introduction to Environmental Design, HU, G, H (3)  
ALA 102 Architecture, Landscape Architecture and Society, G (3)  
APH 313 History of Architecture I, HU, G, H (3)  
APH 314 History of Architecture II, HU, G, H (3)  
APH 411 First Concepts (3)  
LPH 311 Contemporary Landscape Architecture, HU (3)  
APH 598 South American Architecture (3)

##### Design:

DSC 101 Design Awareness, HU, G (3)

##### Graphic Design:

GRA 111 Graphic Design History I, HU (3)  
GRA 112 Graphic Design History II (3)  
GRA 225 Communication/Interaction Design Theory (3)  
GRA 345 Design Rhetoric, L (3)  
GRA 440 Finding Purpose (3)

##### Industrial Design:

IND 242 Materials and Design (3)  
IND 243 Design for Ecology and Social Equity (3)  
IND 316 20th-Century Design I, HU, H (3)

IND 317 20th-Century Design II, HU, H (3)  
IND 344 Human Factors in Design (3)  
IND 354 Principles of Product Design (3)  
IND 470 Professional Practice for Industrial Design, L (3)

Interior Design:

INT 111 Interior Design Issues and Theories, HU (3)  
INT 121 Introduction to Computer Modeling for Interior Design, CS (3)  
INT 123 Introduction to Computer-Aided Design of Built Environments (3)  
INT 131 Design and Human Behavior, SB (3)  
INT 310 History of Interior Design I, HU, H (3)  
INT 311 History of Interior Design II, HU, H (3)  
INT 412 History of Decorative Arts in Interiors, HU (3)  
INT 413 History of Textiles in Interior Design (3)  
INT 494 Latin American Design (3)

Urban Planning:

PUP 100 Introduction to Environmental Design, HU, G, H (3)  
PUP 190 Sustainable Cities, HU/SB, G (3)  
PUP 200 The Planned Environment, HU, H (3)  
PUP 301 Introduction to Urban Planning, L (3)  
PUP 363 History of Planning (3)  
PUP 412 History of the City (3)  
PUP 425 Urban Housing Analysis (3)  
PUP 430 Transportation Planning and the Environment (3)  
PUP 432 Planning and Development Control Law (3)  
PUP 442 Environmental Planning (3)  
PUP 444 Preservation Planning (3)  
PUP 445 Women and Environments, C (3)  
PUP 475 Environmental Impact Assessment (3)  
PUP 485 International Field Studies in Planning, G (3)

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major

allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major.

*Contact Information:*

School of Design Innovation  
<http://design.asu.edu/students/minors.shtml>  
DS (DESIGN SOUTH) 101  
480/965-7007

**Early Childhood Education (Minor) EDECEMIN**

Program information not available at time of publication.  
Not accepting new students.

*Contact Information:*

College of Teacher Education and Leadership  
<http://ctel.asu.edu/>

**Economics (Minor) LAECNMIN**

*Description:* The program of study is designed for students planning to seek employment upon completion of their undergraduate studies or for students intending to go on to graduate school or law school.

*Program Requirement:* This minor (and B.I.S. area of concentration) requires 18 credit hours of course work which includes ECN 211 and 212, and 12 hours of economics courses at the 300 level or above for which all prerequisites have been met. Only courses in which a student receives a grade of "C" (2.00) or higher may be used to meet these requirements.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or

department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information:  
<http://wpcarey.asu.edu/ecn/advising.cfm>.

*Contact Information:*

Economics Program in CLAS  
<http://clas.asu.edu/minors/description/?vid=584>  
BAC 653  
480/965-2128

**Economics for Students Planning a Career in Law (Minor) LAECNLMIN**

*Description:* The program of study is designed for students planning to seek employment upon completion of their undergraduate studies or for students intending to go on to graduate school or law school.

*Program Requirement:* This minor requires 18 credit hours of course work that includes ECN 211, 212, 312 (formerly 314), 450, 453 and one additional economics course at the 300 level or above for which all prerequisites have been met. Only courses in which a student receives a grade of "C" (2.00) or higher may be used to meet these requirements.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the

minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information:  
<http://wpcarey.asu.edu/ecn/advising.cfm>.

*Contact Information:*

Economics Program in CLAS  
<http://clas.asu.edu/minors/description/?vid=585>  
BAC 653  
480/965-2128

**English (Minor) ASENGMIN**

*Description:* A minor in English represents an ideal choice for students who enjoy English, but who are committed to another major. Our requirements ground the student in the basics of literary and cultural study, and then allow for a range of course offerings in creative writing, linguistics, rhetoric, literature and technical and professional communication. The minor will help the student to become a better writer, reader and thinker, making the English minor the perfect complement to any major. Once completed, "Minor: English" appears on the transcript.

*Program Requirement:* The minor in English requires a minimum of 24 credit hours.

**Required Core Course:**

ENG200 Critical Reading and Writing about Literature L/HU (3)

**Campus Specific Requirements**

**Distribution Cluster Requirement:**

Select one course from each distribution cluster. At least two courses must be at the 400-level. Students may once only, use one course to satisfy two distribution requirements.

1. Literature and culture before 1860
2. Literature and culture after 1860
3. Theory and interdisciplinary studies
4. Ethnicity, gender and postcoloniality
5. Rhetoric, writing and linguistics

Total 24

Additional hours to complete 24 credit hours are electives chosen from program offerings. Eighteen credit hours must be upper division.

*Enrollment Requirements:* Students wishing to pursue the English minor should consult an academic advisor in the unit offering that minor to ensure that the appropriate set of courses is taken, to sign the minor check sheet, and to have the

minor added to their program of study. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major recognizes the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

Division of Humanities, Arts, and Cultural Studies

[http://newcollege.asu.edu/programs/english/minor\\_certs/minor.shtml](http://newcollege.asu.edu/programs/english/minor_certs/minor.shtml)

harcs.dept@asu.edu

FAB N290

602/543-4444

**English (Minor) LAARTHMIN**

Program information not available at time of publication.

Not accepting new students.

*Contact Information:*

<http://clas.asu.edu/>

**English - Linguistics (Minor) LAENGMINN**

*Description:* In the minor in English with a concentration in linguistics, students focus on the history and structure of language.

*Program Requirement:* The minor in English with a concentration in linguistics consists of 24 credit hours. Required courses are as follows:

ENG 200 Critical Reading and Writing About Literature, L/HU (3)

ENG 213 Introduction to the Study of Language (3)

ENG 221 Survey of English Literature, HU (3) or

ENG 222 Survey of English Literature, HU, H (3) or

ENG 241 Literatures of the United States to 1860, HU (3) or

ENG 242 Literatures of the United States, 1860 to Present, HU (3)

ENG 312 English in Its Social Setting, L/HU/SB (3)

ENG 314 Modern Grammar (3)

ENG 413 History of the English Language, HU (3)

The six additional hours are electives chosen from the department's offerings, with at least one course (three hours) required at the 300 or 400 level. A grade of "C" (2.00) or higher is required in all courses for the minor.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if the college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met; and the college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

Department of English  
<http://english.clas.asu.edu>  
englishadvising@asu.edu  
LL 542  
480/965-3168

### **English - Literature (Minor) LAENGMINT**

*Description:* Students pursuing a minor in English with a concentration in literature study British, American and global literatures in English from the earliest writings to the present.

*Program Requirement:* The minor in English with a concentration in literature consists of 24 credit hours, including ENG 200 Critical Reading and Writing About Literature, L/HU (3) and one course from three of the following distribution areas:

- Literature and culture before 1800
- Literature and culture after 1800.
- Literary theory and interdisciplinary studies.
- Transnational, postcolonial and global literatures.

At least one of these three distribution area courses must be 400-level. To complete the 24 credit hours, students choose electives from among the department's offerings. At least four courses (12 of the 24 hours) must be taken at the 300 or 400 level. A grade of "C" (2.00) or higher is required in all courses taken for the minor.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if the college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met; and the college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

Department of English  
<http://english.clas.asu.edu>  
[englishadvising@asu.edu](mailto:englishadvising@asu.edu)  
LL 542  
480/965-3168

**Environmental Resources (Minor) ECERSMIN**

Program information not available at time of publication.

Not accepting new students.

*Contact Information:*

College of Technology and Innovation  
<http://technology.asu.edu/>

**Ethnic Studies (Minor) ASETHMIN**

*Description:* Students take courses that introduce a general conceptual framework regarding race and ethnicity and how they intersect in the construction of social formations. Students seeking the minor in ethnic studies complete an internship that is designed to give a hands-on experience working in community-based settings. With an emphasis on service learning that combines the acquisition of analytical skills from classroom instruction and work experience gained through internships, students are placed at a significant advantage to pursue their goals.

*Program Requirement:* The minor consists of 21 credit hours, 15 of which must be at the upper-division level. Students are encouraged to take courses that develop breadth rather than limiting their selection to courses in one particular discipline. Up to three credit hours of individualized instruction may be applied toward the minor. All courses must be passed with a minimum grade of “C” (2.00).

### **Required Courses**

ETH 300 Principles of Ethnic Studies, C (3)  
ETH 484 Ethnic Studies Internship (3)

### **Electives\*** (15)

\*These courses must be chosen from the approved ethnic studies course list in consultation with the ethnic studies advisor.

*Enrollment Requirements:* Students wishing to pursue the ethnic studies minor should consult an academic advisor in the unit offering that minor to ensure that the appropriate set of courses is taken, to sign the minor check sheet and to have the minor added to their program of study. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major recognizes the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

#### *Contact Information:*

Division of Humanities, Arts, and Cultural Studies  
[http://newcollege.asu.edu/programs/erfns/minor\\_cert/minor.shtml/](http://newcollege.asu.edu/programs/erfns/minor_cert/minor.shtml/)  
harc.dept@asu.edu  
FAB N270  
602/543-4444

### **Exercise Science and Physical Education (Minor) LAPEMIN**

Program information not available at time of publication.

Not accepting new students.

#### *Contact Information:*

College of Liberal Arts and Sciences  
<http://clas.asu.edu/>

### **Film and Video Studies (Film) (Minor) ASFILMIN**

Program information not available at time of publication.

Not accepting new students.

#### *Contact Information:*

New College of Interdisciplinary Arts and Science  
<http://www.newcollege.asu.edu/>

### **Film and Video Studies (Media) (Minor) ASVIDMIN**

Program information not available at time of publication.

Not accepting new students.

#### *Contact Information:*

New College of Interdisciplinary Arts and Science  
<http://www.newcollege.asu.edu/>

### **Family and Human Development (Minor) LAFASMIN**

*Description:* A minor in family and human development, from the School of Social and Family Dynamics, exposes students to the basic course work and issues within the discipline. This program provides an exceptional balance to studies in psychology, communication, education, business or nursing.

*Program Requirement:* The minor in family and human development consists of 18 credit hours in which students specialize in family studies/child development. At least 12 of the 18 credit hours must be in upper-division courses. Students take the following courses:

- CDE 232 Human Development, SB (3)
- FAS 331 Marriage and Family Relationships, SB (3)
- FAS 370 Family, Ethnic, and Cultural Diversity, SB, C (3)

Three courses (or nine credit hours) must be selected from the following and at least one course must be a CDE course:

- CDE 337 Early Childhood Intervention (3)
- CDE 430 Infant/Toddler Development in the Family, SB (3)
- CDE 444 Risk and Variation in Child Development (3)
- CDE 498 Pro-Seminar (3) or FAS 498 Pro-Seminar (3)
- FAS 431 Parent-Adolescent Relationships SB (3)
- FAS 440 Fundamentals of Marriage and Family Therapy (3)

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if: the

college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met; and the college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information:  
<http://www.asu.edu/clas/ssfd/undergrad/minor.html>.

*Contact Information:*

School of Social/Family Dynamics T  
<http://ssfd.clas.asu.edu/>  
ssfd@asu.edu  
SS 144  
480/965-6978

**Film and Media Production (Minor) FAFMPMIN**

*Description:* Students pursuing the film minor will study the basic production processes of film while exploring its history and contemporary social issues.

*Program Requirement:* The school offers a minor in film and media production consisting of 15 credit hours of course work. A grade of "C" (2.00) or higher is required for all courses in the minor. All prerequisites for the minor courses must be met. Transfer students may transfer up to six credit hours toward the minor.

The following courses are required, for a total of 15 credit hours:

- FMP 201 Film The Creative Process I, HU (3)\*
- FMP 250 Sex and Violence in Film and TV: Ethics Survey (3)
- FMP 300 Focus on Film: Film Production for Nonmajors (3)
- THE 403 Independent Film (3)
- Upper division elective in FMP, THP or THE related to film and media production (3)

\*Students considering a minor in theatre concurrently must complete an additional course in theatre or film to make up for the overlapping FMP 201 course.

Courses ordinarily limited to majors only are available to minors on a second-priority basis; that is, minors may not register for these courses early, but are allowed to register after all major students' needs have been met.

*Enrollment Requirements:* Contact the Herberger Institute for Design and the Arts advising office for information at <http://theatrefilm.asu.edu/students/current/undergrad-minors.php>.

*Contact Information:*  
School of Theatre and Film  
<http://theatrefilm.asu.edu>  
[theatrefilm@asu.edu](mailto:theatrefilm@asu.edu)  
GHALL 232  
480/965-5337

### **Film and Media Studies (Minor) LAFMSMIN**

*Description:* The film and media studies minor is useful for students who want to explore the critical and creative study of film and media. Students can select to study a range of courses that emphasize media and society, media industries, styles and genres and screenwriting.

*Program Requirement:* The film and media studies minor consists of 18 credit hours. Of the 18 credit hours, 12 credit hours are upper division courses. Required courses include:

- FMS 100 Introduction to Film, HU
- FMS 200 Film History, HU
- FMS 300 Media and Cultural Studies, HU, L
- Three upper-division courses from the areas of emphasis course list

For more information contact the film and media studies advisor.

*Transfer Admission Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if: the college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met; and the college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

Dean, College of Liberal Arts and Sciences

<http://film.asu.edu/minor>

[filminfo@asu.edu](mailto:filminfo@asu.edu)

LL 641

480/965-6747

**Food and Nutrition Management (Minor) ECFNTRMIN**

*Description:* This minor is available to any ASU student interested in learning about food and nutrition. The student will develop a greater understanding of nutrition, the food industry and food service operations.

*Program Requirement:* The minor requires that students take the following courses, for a total of 18 credit hours:

NTR 100 Introductory Nutrition (3) or NTR 241 Human Nutrition (3)

NTR 142 Applied Food Principles (3)

NTR 300 Computer Applications in Nutrition CS (3)

NTR 343 Food Service Purchasing (3)

NTR 344 Nutrition Services Management L (3)

NTR 445 Management of Food Service Systems (3)

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations

include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information:  
<http://www.poly.asu.edu/saas/nutrition/undergraduate/minors.html>.

*Contact Information:*

College of Nursing & Health Innovation  
<http://www.poly.asu.edu/saas/nutrition>  
nutrition@asu.edu  
HSC 1386  
480/727-1728

### **French (Minor) LAFREMIN**

*Description:* Students pursuing a minor in French gain an understanding of the language, literature, and cultures of French speaking peoples and regions. There are opportunities to partake in study abroad programs, which can serve to enhance a student's minor experience and education.

*Program Requirement:* The French minor requires 18 upper-division credit hours. In addition, specific required courses for each area follow and are in a brochure in the School of International Letters and Cultures. Course substitutions are allowed for heritage and advanced speakers of the language. Required courses include:

FRE 311 French Conversation, G (3)  
FRE 312 French Composition, G (3)  
FRE 321 French Literature, L/HU, H (3) or FRE 322 French Literature, L/HU (3)

Nine hours of upper-division French courses with at least three hours from the 400 level are also required.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

School of International Letters and Cultures  
<http://silc.asu.edu/undergraduate/majors-minors-certs>  
silcadvising@asu.edu  
LL 440  
480/965-6281

### **Geography (Minor) LAGCUMIN**

*Description:* The minor in geography, with a minimum of 18 credit hours, enables students to be as broad or specific in their geographic education as they wish. Beyond the two required courses, the remaining courses should be chosen in consultation with the geography advisor.

*Program Requirement:* A minor in geography is awarded to students who complete a minimum of 18 hours in geography. A grade of "C" (2.00) or higher is required for all courses taken for the minor. The following lower-division courses are required, for a total of six credit hours:

GCU 102 Introduction to Human Geography, SB (3)  
GPH 111 Introduction to Physical Geography, SQ (4) or GPH 411 Physical Geography (3)

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the

minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

School of Geographical Sciences and Urban Planning  
<http://geography.asu.edu/geography-programs>  
geographyadvising@asu.edu  
COOR 5650  
480/965-7533

### **Geological Sciences (Minor) LAGLGMIN**

*Description:* The geological sciences minor is designed for students interested in developing a basic understanding of earth science and analyzing issues through a scientific viewpoint. A minimum of 21 hours of geological science courses is required including two upper-division electives chosen after consultation with an academic advisor.

*Program Requirement:* A minor in geological sciences is awarded to students who complete a minimum of 21 credit hours of geological science courses. There are 15 credit hours of required courses:

GLG 101 Introduction to Geology I (Physical), SQ\* G (3)  
GLG 102 Introduction to Geology II (Historical), SG\*\*, H (3)  
GLG 103 Introduction to Geology I-Laboratory, SQ\* (1)  
GLG 104 Introduction to Geology II-Laboratory, SG\*\* (1)  
GLG 310 Structural Geology (3)  
GLG 321 Mineralogy (3)  
GLG 400 Geology Colloquium (1)

\*Both GLG 101 and 103 must be taken to secure SQ credit.

\*\*Both GLG 102 and 104 must be taken to secure SG credit. The remaining six semester hours may be chosen among other upper-division geological sciences courses, except GLG 300 and 400, after consultation with a departmental advisor.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken.

The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

Department of Geological Sciences  
http://sese.asu.edu  
sesinfo@asu.edu  
PSF 686  
480/965-5081

**German (Minor) LAGERMIN**

*Description:* Students pursuing a minor in German gain an understanding of the language, literature, and cultures of German speaking peoples and regions. There are opportunities to partake in study abroad programs, which can serve to enhance a student's minor experience and education.

*Program Requirement:* Required courses include:

- Two GER 200-level courses (6)
- GER 311 German Conversation, G (3) or GER 312 German Conversation, G (3)
- GER 313 German Composition, G (3)
- One 400-level GER course (3)
- One upper-division GER course (3)

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

School of International Letters and Cultures  
<http://silc.asu.edu/undergraduate/majors-minors-certs>  
silcadvising@asu.edu  
LL440  
480/965-6281

**Global Studies (Minor) LASGSMIN**

*Description:* The School of Government, Politics, and Global Studies offers a minor in global studies for students who wish to examine global issues from a transdisciplinary perspective focused on an overarching theme of quality of life.

*Program Requirement:* The global studies minor consists of 18 credit hours, with at least 12 credit hours in upper division courses. Required courses are:

SGS 101 Thinking Globally: Individual and Authority (3) or SGS 301  
Principles of Global Studies (3)  
SGS 103 (3) or SGS 303 Global Trends (3)

The remaining 12 credit hours may be chosen among the other upper division SGS courses. The student must earn at least a "C" (2.00) in a course for credit hours to be counted toward the minor. Twelve of the 18 credit hours must be taken at the ASU Tempe campus. For minor verification, students must consult the global studies advisor.

*Enrollment Requirements:* Students who wish to pursue minors should get the permission of the department of their major as well as meet with the global studies advisor in the School of Government, Politics and Global Studies.

*Contact Information:*

School of Government, Politics and Global Studies  
<http://globalstudies.clas.asu.edu/>  
globalstudies@asu.edu  
COOR 6th floor  
480/727-8286

**History (Minor) LAHISMIN**

*Description:* Students who pursue the minor in history study the growth and development of human society from all aspects—political, social, economic and cultural. The school covers the history of Europe, the United States, Asia, Latin

America and Africa, and courses are designed to give students both breadth and depth in understanding today's complex world.

*Program Requirement:* The history minor consists of 18 credit hours of course work, at least 12 hours of which are in upper-division course work. Students earning a minor in history must complete one 12-hour HST geographic concentration (U.S., Europe, Asia or Latin America). The School of Historical and Critical Inquiry requires a grade of at least "C" (2.00) in all courses in the minor. A minimum of six upper-division hours in the minor must be taken in residence at the Tempe campus.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

School of Historical and Critical Inquiry

<http://history.clas.asu.edu>

[historyadvisor@asu.edu](mailto:historyadvisor@asu.edu)

COOR 4587

480/965-8364

### **History (Minor) ASHISMIN**

*Description:* The minor in history within the New College of Interdisciplinary Arts and Sciences trains students in the use of basic tools and methods of the historical discipline. Students are exposed to a broad span of modern history, a wide range of historiographical perspectives and approaches, and such fundamental categories of historical analysis as race, class, gender and ethnicity.

*Program Requirement:* The minor in history consists of 18 credit hours of history course work with a grade of “C”(2.00) or higher, of which six credit hours may be lower-division.

Choose one of the following combinations (6 credit hours):

A two-semester survey in U.S. history, European history, or world history

--- or ---

HIS 355 World History to 1500, G, H and HIS 356 World History since 1500, G, H

--- or one course each from the following two lists ---

AMS 310 History of American Systems to 1865, L, C, H  
AMS 320 American Cultural History I, SB, H  
HIS 305 History of American Systems to 1865, L, C, H

AMS 311 History of American Systems since 1865 II, H  
AMS 321 American Cultural History II, SB, H  
AMS 330 Introduction to American Lives, HU  
HIS 304 American Cultural History II, SB, H  
HIS 306 History of American Systems since 1865, H

**Upper-Division Requirements** (3 credit hours)

HIS 300 Historical Methods, L, H

**History Electives** (9 credit hours)

*Enrollment Requirements:* Students wishing to pursue the History minor should consult an academic advisor in the unit offering that minor to ensure that the appropriate set of courses is taken, to sign the minor check sheet, and to have the minor added to their program of study. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major recognizes the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

Division of Humanities, Arts, and Cultural Studies  
[http://newcollege.asu.edu/programs/history/minor\\_certs/](http://newcollege.asu.edu/programs/history/minor_certs/)  
harcs.dept@asu.edu  
FAB N290

602/543-4444

### History & Culture (Minor) ECHTYMIN

*Description:* The history and culture minor focuses on public policy, archival work, Southwest history and related fields. Six degree tracks are available:

- Archival preservation and digital media.
- Environmental history and culture.
- History and culture of the American southwest.
- History and philosophy of science and technology.
- History and public policy.
- History for secondary teachers.

*Program Requirement:* The minor in history and culture consists of 18-24 credit hours as follows:

1. Nine credit hours from the core (HST 300, HST 343, and HST 344).
2. Six credit hours of focus-area courses in their chosen track.
3. Three to nine credit hours of electives.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major.

#### *Contact Information:*

School of Letters and Sciences  
<http://www.poly.asu.edu/saas/humanitiesarts/>  
hua@asu.edu  
SANCA 233

480/727-1526

### **Human Nutrition (Minor) ECNTRMIN**

*Description:* This minor program is available to any ASU student interested in learning about human nutrition. The student will develop a greater understanding of how nutrition contributes to healthy lifestyles and disease prevention.

*Program Requirement:* The minor requires that students take the following courses, for a total 18 credit hours:

- NTR 241 Human Nutrition (3)
- NTR 340 Applications in Human Nutrition (3)
- NTR 341 Introduction to Planning Therapeutic Diets (3)
- NTR 440 Advanced Human Nutrition I (3)
- NTR 441 Advanced Human Nutrition II (3) and NTR 444 Medical Nutrition Therapy (3)

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information and see <http://www.poly.asu.edu/saas/nutrition/undergraduate/minors.html>.

#### *Contact Information:*

College of Nursing & Health Innovation  
<http://www.poly.asu.edu/saas/nutrition>  
nutrition@asu.edu  
HSC 1386  
480/727-1728

### **Interdisciplinary Arts and Performance (Minor) ASIAPMIN**

Program information not available at time of publication.

Not accepting new students.

#### *Contact Information:*

New College of Interdisciplinary Arts and Sciences

<http://www.newcollege.asu.edu/>

### **Interdisciplinary Organizational Studies (Minor) ASIOSMIN**

*Description:* The minor in interdisciplinary organizational studies is designed to increase students' understanding of the behavior and the dynamics of individual, group and organizational processes in the workplace. It incorporates perspectives from the behavioral and social sciences, communication studies and management. The minor is learner-centered and allows students to select course work that matches their career and educational goals.

*Program Requirement:* The minor consists of 21 credit hours, of which 18 must be upper-division course work.

#### **Required Courses**

Research methods course (3)\*

ASB 440 Women in the Global Factory, SB, G (3) or POL 435 Women, Power, Politics, SB, C (3)

PGS 430 Industrial Psychology (3) or SBS 461 Program Evaluation and Policy Research (3)

PGS 453 Organizational Behavior, SB (3)

#### **Cluster 1: Courses Focused on Organizations**

Choose two from the following courses for a total of six credits:

CMN 450 Theory and Research in Organizational Communication, SB (3)\*\*

CMN 451 Employee Participation Processes in Organizations (3)\*\*

CMN 453 Communication Training and Development (3)\*\*

GLB 303 Relationship Management (3)

MGT 301 Principles of Management (3)

MGT 412 Managing Human Resources (4)

PGS 430 Industrial Psychology (3)\*\*\*

PGS 482 Social Influence and Consumer Behavior, SB (3)

PHI 360 Business and Professional Ethics, HU (3)

RTM 301 Leadership in Recreation and Tourism (3)

SBS 461 Program Evaluation and Policy Research (3)\*\*\*

SOC 324 Work and the Workplace, SB, H (3)

SOC 419 Organizations and Technological Change, G (3)  
PGS 484, CMN 484, or SOC 484 (or others) Internship in Organizations (3)

The internship site must be approved by the SBS advisor.

### **Cluster 2: Courses Focused on Diversity Within Organizations**

Choose one from the following courses for a total of three credits:

CMN 463 Cultural and Intercultural Communication Theory and Research, SB, G (3)\*\*

PGS 480 Cross-Cultural Social Psychology, SB, G (3)

POL 435 Women, Power, and Politics, SB, C (3)

SOC 270 Racial and Ethnic Minorities, SB, C (3)

SOC 400 Perspectives on Aging, SB (3)

SOC 426 Social Inequality, SB (3)

WST 350 Race, Class, and Gender, SB, C (3)

WST 487 Gender and International Development, SB, G (3)

\* SBS advisor's approval is required.

\*\* Prerequisites CMN 308 and 309 may be waived for students not majoring in communication studies.

\*\*\* Course may be selected if not used to fulfill core requirements.

*Enrollment Requirements:* The minor in interdisciplinary organizational studies is open to all undergraduate majors. However, students should consult with the advisors in the department of their major to determine if the minor is consistent with their educational goals. Students are encouraged to take courses outside their major and college. No more than six credits may be applied from major requirements toward completion of the minor. Please contact the department for more information and see

[http://newcollege.asu.edu/programs/interdisciplinary\\_org\\_studies/](http://newcollege.asu.edu/programs/interdisciplinary_org_studies/).

#### *Contact Information:*

Division of Social and Behavioral Sciences - W

<http://newcollege.asu.edu/divisions/sbs/>

SBS.Dept@asu.edu

FAB N251

602/543-6058

### **Interior Design History (Minor) ARINTMIN**

*Description:* The minor in interior design history is available to students interested in design and culture. The courses designated for the minor are part of the professional studies in interior design within the program of interior design. Moreover, the courses serve to inform the students about the importance of the

global community, especially sociocultural groups, and the impact of the global community on the design of the interior environment.

*Program Requirement:* The selected courses satisfy the minimum requirement (18 credit hours, 12 of which must be from the 300 or 400 level) for the minor. To enhance the understanding of the subject matter, the selected courses are sequential in nature and require certain prerequisites. Consequently, students should carefully note the semester in which any of these courses are offered.

Required Courses:

- DSC 101 Design Awareness, HU, G (3)
- INT 111 Interior Design Issues and Theories, HU (3)
- INT 310 History of Interior Design I, HU, H (3)
- INT 311 History of Interior Design II, HU, H (3)
- INT 412 History of Decorative Arts in Interiors, HU (3)
- INT 413 History of Textiles in Interior Design (3)

Students must have an overall GPA of 2.50 or higher and achieve a minimum 2.50 GPA in minor classes to be awarded the minor.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information:  
<http://design.asu.edu/students/minors.shtml>.

*Contact Information:*

School of Design Innovation  
<http://design.asu.edu/interior/index.shtml>  
CDN 162

480/965-3571

### **Italian (Minor) LAITAMIN**

*Description:* Students pursuing a minor in Italian gain an understanding of the language, literature and cultures of Italian speaking peoples and regions. There are opportunities to partake in study abroad programs, which can serve to enhance a student's minor experience and education.

*Program Requirement:* The Italian minor requires 18 upper-division credit hours. In addition, specific required courses for each area follow and are in a brochure in the School of International Letters and Cultures. Course substitutions are allowed for heritage and advanced speakers of the language.

Required courses include:

- ITA 201 Intermediate Italian, G (4)
- ITA 202 Intermediate Italian, G (4)
- ITA 311 Italian Composition and Conversation, G (3) or ITA 312 Italian Composition and Conversation, G (3) or ITA 315 Italian for Business (3)
- ITA 325 Introduction to Italian Literature, HU (3)
- One 300 or 400-level ITA course (3)
- One 400-level ITA course (3)

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

#### *Contact Information:*

School of International Letters and Cultures

<http://silc.asu.edu/undergraduate/majors-minors-certs>

silcadvising@asu.edu  
LL 440  
480/965-6281

### **Justice Studies (Minor) LAJUSMIN**

*Description:* The minor in justice studies is designed for students interested in developing an understanding of meanings of justice and injustice and analyzing often controversial issues through critical inquiry and social science investigation.

*Program Requirement:* Eighteen credit hours of graded classroom JUS course work are required, including JUS 105 or 305 and JUS 303. No pass/fail or noncredit course work may be applied to the minor. A minimum of nine credit hours must be resident credit at the Tempe campus, and at least 12 credit hours must be upper-division. Students must receive a minimum grade of "C" (2.00) for all courses in the minor and meet all course eligibility requirements, including prerequisites.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

#### *Contact Information:*

School of Social Transformation  
<http://sjsi.clas.asu.edu>  
justiceinfo@asu.edu  
WILSN 228  
480/965-7682

### **Kinesiology (Minor) LAKINMIN**

*Description:* The kinesiology minor is for the student interested in gaining a disciplinary knowledge of anatomical, biomechanical, developmental, physiological, psychological and sociological aspects of human movement and physical activity.

*Program Requirement:* The minor in kinesiology consists of the 21 credit hours shown below and 15-21 credit hours of prerequisite courses. All prerequisite courses must be completed with a grade of "C" (2.00) or higher before taking the respective Kinesiology core course. All Kinesiology courses must also be completed with a grade of "C" (2.00) or higher.

KIN 101 Introduction to Kinesiology (3)

Choose nine credits from among the courses below:

KIN 335 Biomechanics (3)

KIN 340 Physiology of Exercise (3)

KIN 345 Motor and Developmental Learning (3)

KIN 352 Psychosocial Aspects of Physical Activity, SB, C (3)

Nine additional credit hours in KIN, excluding KIN 305, 310, 484, 492, 493, 498 and 499

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

#### *Contact Information:*

Department of Kinesiology

<http://kinesiology.clas.asu.edu/>

kinesundgrad@asu.edu  
PEBW 218  
480/965-3875

### Landscape Architecture Studies (Minor) ARLNDMIN

*Description:* The minor in landscape studies is designed for students who have an interest in landscape aesthetics, but are pursuing a major in another field. The course selection is intended to provide greater understanding of landscape issues that may be relevant in related professional disciplines and to broaden knowledge about the landscape in which we live.

*Program Requirement:* A minimum of 18 credit hours (to include six credit hours of upper-division course work) are required for the minor.

#### Required Courses:

- ALA 100 Introduction to Environmental Design, HU, G, H (3)
- ALA 102 Architecture, Landscape Architecture, and Society, G (3)
- LPH 210 History of Landscape Architecture, HU, H (3)
- LPH 211 Contemporary Landscape Architecture, HU (3)

Six additional semester hours of electives in the landscape architecture history and theory concentration must be selected from the following list, for a total of 18 credit hours, of which 12 hours must be taken at the 300 or 400 level:

- APH 494 Culture of Place, C (3)
- APH 511 Energy Environment Theory (3)
- ANP 494 Special Topics (1-3)
- LPH 394 Special Topics (3)
- LPH 410 Social Factors in Landscape and Urban Planning (3)
- LPH 411 Landscape Architecture Theory and Criticism (3)
- LPH 412 Landscape Ecology and Planning (3)
- LPH 413 Southwest Landscape Interpretation (3)
- LPH 494 Special Topics (3)
- LPH 499 Individualized Instruction\* (3)
- LPH 598 Special Topics (3)
- LPH 485 International Field Studies in Landscape Architecture (6)

\* These courses require a petition to the School of Architecture and Landscape Architecture.

A minimum GPA of 2.50 in minor courses is required to earn the minor in landscape architecture studies. In addition, students may not use a core course to count toward the minor. Students pursuing the B.S.D. in architecture must petition the school to request a substitution for any core courses that are also included in the landscape architecture minor.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major.

*Contact Information:*

School of Architecture and Landscape Architecture

<http://design.asu.edu/sala/minors.shtml>

CDN 162

480/965-3536

### **Life Sciences (Minor) ASLSCMIN**

*Description:* A minor in life sciences can be a valuable asset particularly when paired with an appropriate major. For instance, a biology minor paired with a political science major would provide a good background for someone who wanted to practice environmental law.

*Program Requirement:* Required Courses (28)

- BIO 187 General Biology I, SG (4)
- BIO 188 General Biology II, SQ (4)
- CHM 113 General Chemistry, SQ (4)
- CHM 116 General Chemistry II, SQ (4)
- LSC 320 Fundamentals of Ecology (3)
- LSC 322 Fundamentals of Ecology Laboratory (1)
- LSC 347 Fundamentals of Genetics (3)
- LSC 348 Fundamentals of Genetics Laboratory (1)
- LSC 353 Cell Biology (3)
- LSC 355 Cell Biology Laboratory (1)

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

Division of Mathematical and Natural Sciences  
<http://newcollege.asu.edu/programs/lifesci/>  
MNS.Dept@asu.edu  
CLCC 217  
602/543-6050

**Literature, Writing and Film (Minor) ECLWFMIN**

*Description:* Literature, writing, and film offers students the opportunity to develop their skills in professional, academic and imaginative writing, as well as their interpretation of literary and non-literary texts and critical thinking. The focus is on effective writing, critical thinking, and sophisticated reading of literary and non-literary texts. The program stresses cultural and information literacy. It encourages the study of texts in their cultural context and stresses the role of media and technology in the reading process.

The philosophy of the program is that students should be offered an experience that integrates formal course work, independent and varied research, internships and service opportunities. The program goal is to prepare independent and effective scholars and professionals who can transition seamlessly into careers in writing and teaching and who are well prepared for graduate or further professional study. Three tracks are available:

- English for secondary teachers.

- Writing.
- Literature and film.

*Program Requirement:* The minor in literature, writing and film consists of 18-24 credit hours as follows:

1. Nine credit hours from the core (ENG 200, ENG 217 and ENH 230).
2. Six credit hours of focus-area courses in their chosen track.
3. Three to nine credit hours of electives.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major.

*Contact Information:*

School of Letters and Sciences  
<http://www.poly.asu.edu/saas/humanitiesarts/>  
 hua@asu.edu  
 SANCA 233  
 480/727-1526

**Materials Science and Engineering (Minor) ESMSEMIN**

*Description:* The materials science and engineering minor is designed to give other science and engineering majors an in-depth understanding of materials, including their structure, processing, properties, performance and relationships.

*Program Requirement:* Students are required to take six courses (20-21 credits), listed below:

CHM 114 (4) or CHM 113 (4)  
CHM 116 (4)  
MSE 250 Structure and Properties of Materials (3)  
MSE 355 Structure and Microstructure of Materials (3)  
MSE 356 Structure and Microstructure of Materials Laboratory (1)  
Two MSE courses at the 300 level or higher

One materials-related course from the following list:

BME 318 Biomaterials (4)  
CEE 353 Civil Engineering Materials (3)  
CHE 458 Semiconductor Material Processing (3)  
CHM 471 Solid State Chemistry (3)  
EEE 352 Properties of Electronic Materials (4)  
EEE 436 Fundamentals of Solid-State Devices (3)  
MAE 351 Manufacturing Processes (3)  
Any MSE course at the 300 level or higher  
PHY 481 Materials Physics I (3)

*Enrollment Requirements:* Students need sophomore status and a minimum 3.00 GPA to enroll in the minor in materials science and engineering, and a 2.50 GPA in all courses in the minor to receive the minor.

*Contact Information:*

Materials Program  
<http://som.asu.edu>  
som@asu.edu  
ECG 303  
480/727-9311

**Mathematics (Minor) ASMATHMIN**

*Description:* The minor in mathematics explores the study of higher mathematics. It is designed to enable the student to understand the mathematics most commonly used in business, economics and science. It is expected that students in the minor will be able to reason, and to find creative solutions to problems that were either presented to them or meaningfully formulated by them. The minor is recommended for students who plan to major in integrative studies, life sciences and business, and those who are preparing for further graduate study.

*Program Requirement:* The minor in mathematics consists of a minimum of 27 credit hours, of which nine credit hours must be taken in the mathematical sciences and applied computing department.

Required Courses (27)

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 (3)  
MAT 342 Linear Algebra (3)

Choose three electives from the following courses, or other approved course, in consultation with a departmental advisor, for a total of nine credits:

MAT 310 Introduction to Geometry (3)  
MAT 371 Advanced Calculus I (3)  
MAT 411 History and Philosophy of Mathematics, HU, H (3)  
MAT 443 Abstract Algebra (3)  
MAT 445 Theory of Numbers (3)  
STP 420 Introductory Applied Statistics, CS (3)

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major.

*Contact Information:*

Department of Mathematical Sciences & Applied Cmpg  
[http://www.newcollege.asu.edu/programs/math\\_sci/](http://www.newcollege.asu.edu/programs/math_sci/)  
MNS.Dept@asu.edu  
CLC C217  
602/543-6050

**Mathematics (Minor) LAMATMIN**

*Description:* The minor in mathematics is designed for students who want to further their knowledge of mathematics and is recommended for students who are

majoring in such disciplines as physics, engineering, business, economics and the life and social sciences where the need for quantification in the analysis of phenomena is strong.

*Program Requirement:* The minor in mathematics consists of a minimum of 18 credit hours. Required courses are as follows, for a total of nine to eleven hours:

- MAT 271 Calculus with Analytic Geometry II MA (4) or MAT 266 Calculus for Engineers II (3)
- MAT 272 Calculus with Analytic Geometry III MA (4) or MAT 267 Calculus for Engineers III (3)
- MAT 342 Linear Algebra (3) or MAT 343 Applied Linear Algebra (3)

Electives must be upper-division courses in mathematics (MAT) or Statistics and Probability (STP). Students may not apply MAT 411 or 485 or a course not offered at ASU to the minor, unless otherwise approved by a department advisor.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

School of Mathematical and Statistical Sciences  
<http://math.asu.edu/>  
math@asu.edu  
PS A 211  
480/965-7195

### **Mathematics (Teaching) (Minor) LAMATTMIN**

Program information not available at time of publication.

Not accepting new students.

*Contact Information:*

<http://clas.asu.edu>

### **Media Analysis (Minor) CSCMOMINA**

*Description:* The mass media, more than ever before, play a vital role in how information is disseminated and how societies are shaped and function. As traditional forms of media and information dissemination change rapidly in an increasingly technological world, it is more important than ever for students to understand the way that media work as well as learn to evaluate the messages that are sent. All students can benefit from the study of mass communications institutions, functions and techniques. In this minor, students will learn to understand the roles that media play, how they are changing and their impact. They will be given the tools they need to critically evaluate, analyze and interpret media messages in order to become wise consumers of media themselves.

*Program Requirement:* The minor of media analysis consists of 18 credit hours of course work. This is a requirement consistent with many other minor programs at Arizona State University and at other colleges and universities. The focus of the program is on media analysis. Students in the minor will concentrate on evaluating the impact of information dissemination rather than on topics that focus on the practice of gathering and distributing messages. Students in the minor may not register for courses in the professional journalism curriculum.

To take upper-division courses, the student must be at least a sophomore (25 credit hours). To pursue the minor in media analysis, the student must maintain a minimum 2.00 overall GPA, obtain a minimum grade of "C" (2.00) in each course in the minor and have a major other than journalism and mass communication.

Three specific classes will be required (nine hours). The required classes are:

MCO 120 Media and Society, SB (3)

MCO 240 Media Issues in American Pop Culture (3)

MCO 418 History of Mass Communication, SB, H (3)

In addition, students select three additional courses (nine hours) from the list of electives offered by the Cronkite school. The common element of these courses is that they focus on understanding specific aspects of the mass media and how those aspects impact individuals and societies in terms of function, effects, and enculturation. Electives offered include:

MCO 200 Introduction to the Electronic Media (3)

MCO 240 Media Issues in American Pop Culture (3)

MCO 430 International Mass Communication, G (3)  
MCO 435 Emerging Media Technologies (3)  
MCO 450 Visual Communication, HU (3)  
MCO 455 War and the Mass Media (3)  
MCO 460 Race, Gender and Media, C (3)  
MCO 465 Sports and Media (3)  
MCO 473 Sex, Love and Romance in the Mass Media, SB (3)  
MCO 494 Special Topic courses (3)

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if, 1) the college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met, and 2) the college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information:  
[http://cronkite.asu.edu/undergrad/minor\\_media\\_analysis.php](http://cronkite.asu.edu/undergrad/minor_media_analysis.php).

*Contact Information:*

Walter Cronkite School of Journalism & Mass Comm <http://cronkite.asu.edu>  
[cronkiteadvising@asu.edu](mailto:cronkiteadvising@asu.edu)  
CRONK 220  
602/496-5055

**Microbiology (Minor) LAMICMIN**

Program information not available at time of publication.

Not accepting new students.

*Contact Information:*

College of Liberal Arts and Sciences  
<http://clas.asu.edu>

### Music (Minor) FAMUSMIN

*Description:* The music minor is designed for those students who are interested in a broad introduction to the study of music. The program allows for a diverse exposure to traditional through contemporary music practices, with numerous options to select courses based on students' interests.

*Program Requirement:* The School of Music offers a minor in music consisting of 21 credit hours of course work. A minimum grade of "C" (2.00) is required in all courses.

#### Required Courses (9 credit hours)

- MHL 201 Mac Literacy for Musicians\* (3)
- MUP 100 Concert Attendance (four semesters) (0)
- MUS 100 Fundamentals of Music Notation (3)
- MUS 340 Survey of Music History (3)

#### Music history: Select two of the following five courses (6 credit hours)

- MUS 347 Jazz in America (3)
- MUS 355 Survey of American Music (3)
- MUS 356 Survey of Musical Theatre (3)
- MUS 361 African Music (3)
- MUS 410 History of Women in Music (3)

#### Electives: Choose two of the following five courses (6 credit hours)

- MUS 354 Rock and Roll (3)
- MUS 354 Rock and Roll since 1971 (3)
- MUS 354 Hip-Hop (3)
- MUS 354 Elvis Presley (3)
- MUS 354 The Beatles (3)

\* The online version of this course is required.

Note: MHL, MTC, MUP courses may be accepted as electives if the appropriate prerequisites are met and with instructor approval. Music reading and notation skills are a prerequisite for the music minor.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if, 1) the college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met, and 2) the college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information at <http://music.asu.edu/students/current/undergrad/minorinfo.php>.

*Contact Information:*

Dean, Herberger Institute for Design and the Arts  
<http://music.asu.edu>  
ugradmusicadmissions@asu.edu  
MUSIC E167  
480/965-3371

**Nonprofit Administration (Minor) PPNLMMIN**

*Description:* The minor in nonprofit administration empowers students to positively impact the community in which they work. Course work introduces students to the competencies required for successful professional careers with nonprofit, social sector organizations that exist to improve the quality of life of communities. The nonprofit sector in the United States is unique in form and function, with more than 1.2 million organizations in the U.S. The Arizona nonprofit sector also is experiencing robust growth with more than 29,000 registered nonprofits and more than 1,500 new nonprofits formed yearly. The minor allows students enrolled in other undergraduate programs at ASU to broaden their educational experiences. Students from such various disciplines as business, education, museum studies, nursing, public affairs, religious studies, social work and many others might find this program a beneficial supplement to their existing program.

*Program Requirement:* Completion of a nonprofit minor in the School of Community Resources and Development requires the following:

1. NLM 160.
2. NLM 220.
3. Fifteen hours of graded classroom course work (no internship, no independent study).
4. Nine hours of course work at the upper division level, from the approved list.
5. A minimum grade of "C" (2.00) is required for all classes in the minor.
6. No double counting of courses for both a major and the minor.

## **Standards**

1. A minimum GPA of 2.00 for those pursuing the minor, a major or pre-major, other than B.S. in nonprofit leadership and management.
2. Must be a junior to take 400-level courses.

## **Course Selection** (approved list)

### **Required Courses**

NLM 160 Voluntary Action and Community Leadership (3)

NLM 220 Introduction to Nonprofit Organizations (3)

### **Select three courses**

NLM 300 Fund Raising and Resource Development (3)

NLM 301 Sustainable Communities (3), (NLM 160 or 191 must be completed before or simultaneously with a grade of "C" (2.00) or higher)

NLM 302 Inclusive Community Development C (3), (NLM 160 or 191 must be completed before or simultaneously with a grade of "C" (2.00) or higher)

NLM 310 Volunteer Management (3)

NLM 435 Service Learning for Community Development (3)

NLM 494

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information at <http://scrd.asu.edu/portal/programs/undergraduate/nonprofit-leadership-management-nlm>.

*Contact Information:*

School of Community Resources and Development

<http://scrd.asu.edu>

scrd@asu.edu

UCENT 550

602/496-0550

**Parks and Protected Area Management (Minor) PPRMMINT**

*Description:* As the Southwest continues to develop and urbanize, the demands and pressures on public lands and natural resources continues to grow. The interplay between society and natural resources is key to understanding modernity and continues to be at the center of policy issues and quality of life debates in the West. The minor in parks and protected area management introduces students to the role of parks and protected areas, with a focus on the unique issues faced by urban-proximate natural area managers. The minor allows students enrolled in other undergraduate programs at ASU to broaden their educational experiences. Students from such various disciplines including business, education, nursing, public affairs, social work and many others might find this program a beneficial supplement to their existing program. Students interested in the parks and protected area management minor may also be interested in the school's therapeutic recreation program.

*Program Requirement:* Completion of a parks and protected area management minor in the School of Community Resources and Development requires the following:

1. PRM 120.
2. PRM 370.
3. PRM 380.
4. TDM 480.
5. Fifteen hours of graded classroom course work (no internship, no independent study).
6. Twelve hours of course work at the upper-division level, from the approved list. A minimum grade of "C" (2.00) is required for all classes in the minor.
7. No double counting of courses for both a major and the minor.

**Standards**

1. A minimum GPA of 2.00 for those pursuing the minor, a major, or pre-major, other than parks and recreation management, and tourism development and management.
2. Must be a junior to take 400-level courses.

**Course Selection** (approved list)

**Required Courses**

## PRM 120

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information at <http://scrd.asu.edu/portal/programs/undergraduate>.

### *Contact Information:*

School of Community Resources and Development  
<http://scrd.asu.edu>  
scrd@asu.edu  
UCENT 550  
602/496-0550

### **Philosophy (Minor) ASPHIMIN**

*Description:* The minor is designed to provide students with an understanding of central philosophical issues.

The minor provides students with:

- A knowledge of the most important problems and ideas in the philosophical areas studied.
- A capacity for critical thinking and analytical reasoning.
- The ability to present one's positions effectively through oral and written communication.

*Program Requirement:* The minor in philosophy consists of 21 credit hours of philosophy course work, of which 15 must be upper-division hours. Fifteen credit

hours of campus resident credit is required. Only courses in which the student earns a grade of "C" (2.00) or higher will fulfill requirements for the minor.

Courses are to be selected from the following list in consultation with a philosophy advisor to create a coherent and complete program of study:

IAS 411 History and Philosophy of Mathematics, HU, H (3) or MAT 411  
History and Philosophy of Mathematics, HU, H (3)  
IAS 484 Internship (3)  
IAS 494 ST: Special Topics (3)  
PHI 101 Introduction to Philosophy, HU (3)  
PHI 103 Principles of Sound Reasoning, L/HU (3)  
PHI 306 Applied Ethics, HU (3)  
PHI 340 Bioethics, HU (3) or IAS 340 Bioethics, HU (3)  
PHI 360 Business and Professional Ethics, HU (3)  
PHI 406 Moral Dilemmas, L/HU (3) or IAS 406 Moral Dilemmas, L/HU (3)  
PHI 407 Environmental Philosophy and Policy, L/HU (3) or IAS 407  
Environmental Philosophy and Policy, L/HU (3)  
PHI 408 Feminist Ethics, HU (3) or IAS 408 Feminist Ethics, HU (3)  
PHI 494 Special Topics (3)  
PHI 499 Individualized Instruction (3)

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

Division of Humanities, Arts, and Cultural Studies

[http://newcollege.asu.edu/programs/integrative\\_studies/minor\\_cert/philosophy.s](http://newcollege.asu.edu/programs/integrative_studies/minor_cert/philosophy.s)

html  
harcs.dept@asu.edu  
FAB N 290  
602/543-4444

### **Philosophy (Minor) LAPHIMIN**

*Description:* The minor in philosophy provides students with an understanding of philosophical inquiry and method. The minor offers an introduction to the central themes both in the history of philosophy and in the current literature. Minor students have the opportunity to sharpen their critical reasoning skills while addressing profound questions regarding the nature of knowledge, existence, morality, science, law and politics.

*Program Requirement:* A minor in philosophy consists of 18 credit hours, of which at least 12 must be in the upper division and approved by an advisor in the school. All courses must be passed with a minimum grade of "C" (2.00). No more than two courses may be taken in any one of the following philosophical subdisciplines:

- Metaphysics
- Epistemology
- Logic
- History of Philosophy
- Ethics / Political Philosophy

Students should consult with the undergraduate advisor in the philosophy department about a proposed selection of courses before registering.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the

minor are simultaneously being used to fulfill requirements of the student's major. Please contact the School of Historical and Critical Inquiry for more information.

*Contact Information:*

School of Historical and Critical Inquiry  
<http://www.asu.edu/clas/philosophy/>  
philosophy@asu.edu  
COOR 3309  
480/965-3394

**Physics (Minor) LAPHYMIN**

*Description:* Physics is concerned with the nature, structure and interactions of matter and radiation. Adding a physics minor to another major program of study provides a student with the fundamental scientific basis to address the most challenging opportunities faced in a student's career.

*Program Requirement:* Required courses (24)

Choose between the following course combinations (4):

PHY 150 Physics I, SQ (4) or  
PHY 121 University Physics I: Mechanics, SQ (3) and PHY 122 University  
Physics Laboratory 1, SQ (1)\*

Choose between the following course combinations (4):

PHY 151 Physics II, SQ (4) or  
PHY 131 University Physics II: Electricity and Magnetism, SQ (3) and PHY  
132 University Physics Laboratory 2, SQ (1)\*\*

PHY 252 Physics III, SQ (4)  
PHY 334 (3)  
PHY 361 (3)  
Two upper-division electives (to be selected with the approval of the physics  
advisor) (6)

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

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

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.

2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

Department of Physics  
<http://physics.asu.edu>  
[physics.info@asu.edu](mailto:physics.info@asu.edu)  
PS F 470  
480/965-3561

**Plant Biology (Minor) LAPLBMIN**

Program information not available at time of publication.

Not accepting new students.

*Contact Information:*

College of Liberal Arts and Sciences  
<http://clas.asu.edu>

**Political Science (Minor) LAPOSMIN**

*Description:* The minor in political science offers students the necessary skills and knowledge to participate effectively as citizens in a democratic political system and to flourish in the rapidly developing globalization of the world's political institutions, cultures and economies. The major aims to provide students with the tools and skills necessary to make connections linking theory with real world problems and issues.

*Program Requirement:* The minor in political science consists of 18 credit 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 in addition to four POS electives:

POS 110 Government and Politics, SB (3) or POS 310 American National Government, SB (3) (but not both courses)

POS 150 Comparative Government, SB, G (3)  
POS 160 Global Politics, SB, G (3)  
POS 210 Political Ideologies, SB (3)

Students who minor in political science must have a minimum GPA of 2.00 for all courses that count toward the minor. Courses that count toward the minor must have a grade of "C" (2.00) or higher. No more than three credit hours of POS 484 Internship and three credit hours of POS 499 Individualized Instruction may be applied to the minor.

*Enrollment Requirements:* Students who wish to pursue a minor in political science may do so with the permission of the department, school or college of their major as well as the advisor in the School of Government, Politics and Global Studies. An ASU student who is pursuing a degree at any ASU campus may elect to add a minor offered at any other ASU campus.

*Contact Information:*

School of Government, Politics and Global Studies  
<http://www.asu.edu/clas/polisci>  
COOR 6797  
480/965-8563

### Political Science (Minor) ASPOLMIN

*Description:* The political science minor program is designed to help students gain an understanding of theory, practice and policy underlying political processes locally, nationally and internationally, and train students in research skills necessary for the analysis of complex sociopolitical issues locally and globally.

The program strives to meet these goals by offering students learner-centered course work in political theory, American political institutions and international relations and world affairs. These goals are accomplished by offering a flexible program of course work focusing on international urban, race/ethnic sociopolitical areas, internships and service-learning/action research opportunities. Under the direction of faculty, students throughout the degree program focus on intellectual and concrete policy issues in the greater Phoenix metropolitan area, Arizona, the Arizona-Mexico borderlands, the Americas and the world.

*Program Requirement:* The minor in political science consists of 18 credit hours in POL courses, 12 of which must be in upper-division courses. Choose either the lower-division or upper-division option of the following three required core courses; at least one core course must be the upper-division option:

POL 101 Political Ideologies, SB (3) or POL 340 Political Theory, SB/HU (3)  
POL 110 Government and Politics, SB (3) or POL 310 American National Government: Ideas and Institutions, SB, H (3)

POL 160 Global Politics, SB, G (3) or POL 360 World Politics Theory, SB, G (3)  
Political science electives\* (9)

\* A maximum of three credit hours of internship and three credit hours of individualized instruction may be used to fulfill requirements.

*Enrollment Requirements:* The minor in political science is open to all undergraduate majors. However, students should consult with the advisors in the department of their major to determine if the minor is consistent with their educational goals. Please contact the department for more information and see <http://newcollege.asu.edu/programs/polisci/minor/>.

*Contact Information:*

Division of Social and Behavioral Sciences – W  
<http://newcollege.asu.edu/divisions/sbs/>  
FAB N 251  
SBS.Dept@asu.edu  
602/543-6058

**Pre-law (Minor) HSLAWMIN**

*Description:* The prelaw minor is designed to explore the study of law from an interdisciplinary perspective. Students will take a core of classes that will enhance a student's critical thinking and writing skills. In addition, students will select elective courses for the minor with assistance from the School of Criminology and Criminal Justice Advising Office and from a faculty member on the college's prelaw advising committee. In general, the courses selected as prelaw minor electives are those that enhance the student's critical thinking and writing skills, develop the student's knowledge of the law and enhance the student's understanding of the social, cultural, historical, economic and political development of the law in our society and the world.

The minor is designed for students who plan to attend law school or who contemplate careers in fields closely related to the legal profession. Students who exhibit exceptional critical thinking and writing skills are highly successful in their legal studies. It is expected that students in the minor will be able to think both logically and creatively about the law and its philosophical basis. In addition, students will be able to effectively apply legal principles to various factual problems, a rudimentary part of the case book method of legal study.

*Program Requirement:* The 18-credit-hour minor in prelaw consists of nine hours of required courses and nine hours of elective courses to be selected with an advisor. Students may not count classes toward both completion of their major and the prelaw minor.

## Core Classes

Choose three of the following courses, for a total of nine credits:

- CMN 422 Argumentation, Critical Reasoning, and Public Communication, L (3)
- CRJ 360 Substantive Criminal Law (3)
- LES 306 Business Law (3)
- POL 470 Law and the Political Order, SB (3)
- Electives (9)

*Enrollment Requirements:* Please contact the department for more information.

### *Contact Information:*

Dean, College of Human ServicesW  
<http://ccj.asu.edu/>  
FAB S 301  
sccj@asu.edu  
602/543-8319

## Psychology (Minor) ASPGSMIN

*Description:* Psychology is the scientific study of the behavior and mental processes of individuals and groups. The study of psychology includes basic and applied courses in the subfields of clinical, developmental, organizational, cross-cultural and social psychology, cognitive systems and behavioral neuroscience. The psychology degree prepares students for immediate employment, as well as for admission to graduate and professional schools. The program emphasizes the development of wide-ranging skills in critical thinking and reasoning, quantitative and qualitative research methods, working collaboratively on teams and presentation of information in oral and written form.

*Program Requirement:* The minor consists of 22 credit hours in psychology, including the following:

### **Foundations of Psychological Science**

- PGS 101 Introduction to Psychology SB (3)
- PSY 230 Introduction to Statistics CS (3)
- PSY 290 Research Methods SG (4)

### **Social and Developmental Core**

Choose one from the following courses (3):

- PGS 315 Personality Theory and Research SB (3)
- PGS 341 Developmental Psychology SB (3)
- PGS 350 Social Psychology SB (3)

## Neuroscience Core

Choose two from the following courses\* (6):

- PSY 320 Learning and Motivation (3)
- PSY 323 Sensation and Perception (3)
- PSY 324 Memory and Cognition (3)
- PSY 325 Physiological Psychology (3)
- PSY 330 Statistical Methods (3)
- PSY 369 Biology of Human Sexuality (3)
- PSY 470 Psychopharmacology (3)
- PGS or PSY upper-division electives (3)

\* At least one choice must be PSY 323, 324 or 325. A maximum of three credit hours of research (PGS 399 Supervised Research and PGS/PSY 499 Individualized Instruction) may be used to meet the minor requirements. PGS 484 Internship may be taken for elective credit only. All courses must be passed with a minimum grade of "C" (2.00) or higher.

*Enrollment Requirements:* The minor in psychology is open to all undergraduate majors. However, students should consult with the advisors in the department of their major to determine if the minor is consistent with their educational goals. Please contact the division for more information and see [http://newcollege.asu.edu/programs/psychology/minor\\_cert/](http://newcollege.asu.edu/programs/psychology/minor_cert/).

### *Contact Information:*

Division of Social and Behavioral Sciences – W  
<http://newcollege.asu.edu/divisions/sbs/>  
SBS.Dept@asu.edu  
FAB N 251  
6025436058

## Psychology (Minor) LAPGSMIN

*Description:* The minor in psychology focuses on appreciating and understanding the human condition from a scientific, psychological point of view. Students completing the minor in psychology should possess breadth of knowledge pertaining to the major principles, theoretical approaches and findings in psychology.

They should also understand and be able to use basic research and quantitative methods in psychology and be able to gather and synthesize psychological findings.

Finally, they should be able to understand the relevance and applicability of psychological principles, approaches and findings to individual, group and social issues. In so doing, they will be prepared as educated citizens to pursue productive

careers and engage on a daily basis their increasingly complex, information-rich world.

*Program Requirement:* The minor in psychology consists of completing the 22 credit hours of course work in the foundations of psychology and the breadth categories described below. Six credit hours of PGS/PSY courses must be completed at the ASU Tempe or Polytechnic campuses.

Required foundation courses:

PGS 101 Introduction to Psychology  
PSY 230 Introduction to Statistics  
PSY 290 Research Methods

Take one course each from four of the following five clusters:

**Biological**

PSY 325 Physiological Psychology

**Personality/Mental Health**

PGS 315 Personality Theory and Research  
PGS 466 Abnormal Psychology

**Cognitive/Learning**

PSY 320 Learning and Motivation  
PSY 323 Sensation and Perception  
PSY 324 Memory and Cognition

**Developmental**

PGS 341 Developmental Psychology

**Social**

PGS 306 Environmental Psychology  
PGS 350/351 Social Psychology/Honors Social Psychology

Note: If a non-psychology statistics course is approved by the Psychology Department to substitute for PSY 230, an additional psychology course (PGS or PSY prefix) must be taken to complete the 22 credit hours of required psychology course work. Internship credit and teaching assistant credit may not be used to satisfy this requirement. For more information, please contact a psychology advisor.

*Enrollment Requirements:* Students who wish to pursue a minor in psychology may do so with the permission of the department, school or college of their major as well

as the advisor in the Department of Psychology. An ASU student who is pursuing a degree at any ASU campus may elect to add a minor offered at any other ASU campus.

*Contact Information:*

Department of Psychology  
<http://psychology.clas.asu.edu/>  
[psych.advisor@asu.edu](mailto:psych.advisor@asu.edu)  
PSY 255  
480/965-7258

**Public Relations and Strategic Communications (Minor) HSPRSMIN**

*Description:* The minor in public relations and strategic communication prepares professionals with highly effective communication skills-speaking, writing, cultural sensitivity, critical thinking, problem-solving, and conflict management-through a number of academic program options.

*Program Requirement:* The public relations and strategic communications minor will provide students with professional and academic expertise in persuasion and campaign communication, public relations, crisis communication, special events planning, marketing, professional writing and editing (among other areas). Additionally, students will have the opportunity to refine the presentation skills needed for public and community relations. The minor consists of 18 credit hours of upper-division course work, including nine credit hours of required course work and nine credit hours of electives.

Required Core Courses

Choose three of the following courses, for a total of nine credits:

- CMN 320 Communication and Consumerism, SB (3)
- CMN 329 Persuasion (3)
- CMN 353 Professional Communication (3)
- CMN 454 Rhetorical and Critical Approaches to Public Relations (3)
- Electives (9)

*Enrollment Requirements:* The minor in public relations and strategic communications is open to all undergraduate majors. However, students should consult with the advisors in the department of their major to determine if the minor is consistent with their educational goals. Students are encouraged to take courses outside their major and college. Please contact the department for more information.

*Contact Information:*

Division of Social and Behavioral Sciences - W  
[http://newcollege.asu.edu/programs/comm\\_studies/minor/](http://newcollege.asu.edu/programs/comm_studies/minor/)

SBS.Dept@asu.edu  
FAB N 251  
602/543-6058

### Recreation Management (Minor) PPRECMIN

*Description:* The minor in recreation management introduces students to community recreation programming and planning for a variety of populations. The minor allows students enrolled in other undergraduate programs at ASU to broaden their educational experiences. Students from such various disciplines including business, education, nursing, public affairs, social work and many others might find this program a beneficial supplement to their existing program. Students interested in the recreation management minor may also be interested in the school's therapeutic recreation program.

*Program Requirement:* Completion of a recreation management minor in the School of Community Resources and Development requires the following:

1. PRM 120.
2. PRM 424.
3. Fifteen hours of graded classroom course work (no internship, no independent study).
4. A minimum of nine hours of course work at the upper-division level, from the approved list.
5. A minimum grade of "C" (2.00) is required for all classes in the minor.
6. No double counting of courses for both a major and the minor.

### Standards<sup>2</sup>

1. A minimum GPA of 2.00 for those pursuing the minor, a major, or pre-major, other than nonprofit leadership and management, parks and recreation management or tourism development and management.
2. Must be a junior to take 400-level courses.

### Course Selection (approved list)

### Required Courses<sup>2</sup>

PRM 120 Leisure and the Quality of Life, SB (3)  
PRM 424

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.

2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information:  
<http://scrd.asu.edu/portal/programs/undergraduate/parks-recreation-management-prm/minor-in-recreation-management>.

*Contact Information:*

School of Community Resources and Development  
<http://scrd.asu.edu>  
scrd@asu.edu  
UCENT 550  
602/496-0550

### **Religious Studies (Minor) ASRELMIN**

*Description:* The minor in Religious Studies introduces students to the world's religious traditions and how they are used by humans to interpret experiences and find meaning. Students learn to think critically about religious worldviews and presuppositions, and explore the relation to contemporary challenges in the world.

*Program Requirement:* The minor in religious studies consists of 21 credit hours of religious studies course work, of which 18 must be upper-division hours. Fifteen credit hours of campus resident credit is required. Only courses in which the student earns a minimum grade of "C" (2.00) can be counted toward the minor. Courses are to be selected in consultation with the religious studies advisor to create a coherent and complete program of study for the minor.

Choose one from the following courses, for a total of three credits:

- AMS 417 Religious Traditions of the American Southwest, C (3)
- REL 320 Religion in America, HU, H (3)
- REL 321 Religion in America, L/HU, H (3)
- REL 420 Religion in American Life and Thought (3)

Choose two from the following courses for a total of six credits:

ENG 424 Milton, HU (3)  
HIS 363 Reformation (3)  
REL 305 Ritual, Symbol and Myth (3)  
REL 390 Women and World Religions, L/SB, G (3) or WST 390 Women and  
World Religions, L/SB, G (3)  
REL 494 ST: Psychology of Religion (3) or AMS 494 ST: Psychology of  
Religion (3)  
REL 494 ST: Science and Religion (3) or IAS 494 ST: Science and Religion (3)

Choose at least one special topics course, for a total of three credits:

Select from the following prefixes: AMS, CMN, IAS, REL, WST. Examples of topics may include spiritual narratives, communication as theology, testimony in a post-metaphysical world, the goddess religions and gender and the environment.

Choose three additional religious studies courses, for a total of nine credits:

These courses, or other approved courses, must be chosen in consultation with the director and may include REL 484 Internship and/or REL 499 Individual Instruction.

*Enrollment Requirements:* The minor in religious studies is open to all undergraduate majors. However, students should consult with the advisors in the department of their major to determine if the minor is consistent with their educational goals. Students are encouraged to take courses outside their major and college. Please contact the department for more information.

*Contact Information:*

Division of Humanities, Arts, and Cultural Studies

[http://newcollege.asu.edu/programs/integrative\\_studies/minor\\_cert/religious.shtml](http://newcollege.asu.edu/programs/integrative_studies/minor_cert/religious.shtml)

harcs.dept@asu.edu

FAB N 290

602/543-4444

**Religious Studies (Minor) LARELMIN**

*Description:* Students may pursue the minor in religious studies with regional, national, hemispheric, global and a variety of thematic emphases.

*Program Requirement:* The minor in religious studies consists of 18 credit hours, at least 12 of which must be in the upper division. REL 305 is required. For minor verification, students must consult an advisor in the School of Historical and Critical Inquiry.

*Enrollment Requirements:* Students who wish to pursue a minor in religious studies may do so with the permission of the department, school or college of their major as

well as the advisor in the School of Historical and Critical Inquiry. An ASU student who is pursuing a degree at any ASU campus may elect to add a minor offered at any other ASU campus.

Please contact the school for more information and see [http://www.asu.edu/clas/religious\\_studies/undergraduate/major\\_minor.html](http://www.asu.edu/clas/religious_studies/undergraduate/major_minor.html).

*Contact Information:*

School of Historical and Critical Inquiry  
[http://www.asu.edu/clas/religious\\_studies/](http://www.asu.edu/clas/religious_studies/)  
religious.studies@asu.edu  
ECA 377  
480/965-7145

**Romanian (Minor) LAROMMIN**

*Description:* The minor in Romanian provides students with the means to develop their interests in social cultural and political matters that are marked by a strong language dimension.

*Program Requirement:* The Romanian minor consists of 18 semester hours of ROM courses beyond ROM 201. This minor is structured so that it requires all ROM courses to be at the upper division (300 and above) level.

Required courses include:

- ROM 313 Intermediate Composition and Conversation I, G (3)
- ROM 314 Intermediate Composition and Conversation II, G (3)
- ROM 411 Advanced Spoken and Written Romanian I, G (3)
- ROM 412 Advanced Spoken and Written Romanian II, G (3)
- ROM 494 Advanced Romanian Grammar (3)
- ROM 499 Individualized Instruction (3)

Additional notes: A grade of C or better is required in all courses to be counted toward the minor.

A minimum of 6 upper division hours in the minor must be taken in residence at ASU.

Pass/Fail courses cannot be used for the minor.

ROM 101 through 201 are not applicable to the minor.

Course substitutions are permitted for Heritage speakers and other advanced speakers of Romanian.

*Enrollment Requirements:* Students who wish to add a minor in Romanian to the bachelor's degree program they are pursuing may do so if approved by the department, college, or college of the major. Please contact the school for more information.

*Contact Information:*

School of International Letters and Cultures  
<http://silc.asu.edu/undergraduate/majors-minors-certs>  
silcadvising@asu.edu  
LL 440  
480/965-6281

**Russian (Minor) LARUSMIN**

*Description:* Students pursuing a minor in Russian gain an understanding of the language, literature, and cultures of Russian speaking peoples and regions. There are opportunities to partake in study abroad programs, which can serve to enhance a student's minor experience and education.

*Program Requirement:* Required courses include:

RUS 211 Basic Russian Conversation, G (3)  
RUS 212 Basic Russian Conversation, G (3)  
RUS 311 Russian Composition and Conversation, G (3)  
RUS 312 Russian Composition and Conversation, G (3)  
Six credit hours of upper-division RUS courses

Course substitutions with other upper-division RUS course are allowed. Students are encouraged to contact an advisor with any questions.

*Enrollment Requirements:* Students who wish to add a minor in Russian to the bachelor's degree program they are pursuing may do so if approved by the department, college, or college of the major. Please contact the school for more information.

*Contact Information:*

School of International Letters and Cultures  
<http://silc.asu.edu/undergraduate/majors-minors-certs>  
silcadvising@asu.edu  
LL 440  
480/965-6281

**Science, Technology and Society (Minor) ECSTSMIN**

*Description:* The Science, Technology and Society Program offers a minor to students outside the science, technology and society major, regardless of their major field of specialization, and a certificate to nondegree-seeking students and practicing professionals. Living in a 21st-century world is characterized by rapid technological change and uncertainty. Mastering the intricacies of the interrelationship between technology and human systems will enhance a degree in any area and arm graduates with the insights and skills required for success in any endeavor.

*Program Requirement:* The minor in science, technology and society (STS) requires 18 credit hours of course work, 12 hours of which must be STS upper-division courses. Students who minor in STS must have a minimum GPA of 2.00 for all courses that count toward the minor. Courses that count toward the minor must have a grade of “C” (2.00) or higher. A minimum of six upper-division hours in the minor must be taken in residence at the Polytechnic campus.

The following courses are required to complete the minor in STS:

STS 101 Introduction to Science, Technology and Society or STS 304 Science, Technology and Society  
STS 110 Global Technology and Development or STS 317 Science, Technology and Global Engagement

The following courses are available to complete the STS minor:

STS 301 Research in Science and Technology Studies  
STS 302 Philosophy of Science and Technology  
STS 303 History of Science and Technology  
STS 305 Science and Social Theory  
STS 306 Social Effects of Science and Technology  
STS 318 Science, Technology and Government  
STS 325 Science, Technology and Public Policy  
STS 328 Science, Technology and Culture  
STS 329 Cultivating Technology in Newly Industrialized Countries  
STS 330 Information Technology and Globalization  
STS 331 Ethical Issues in Science and Technology  
STS 332 Seminar: Global Issues in Science and Technology  
STS 364 Science, Technology and National Security  
STS 401 Statistics in Science and Technology Studies  
STS 425 Law, Values, and Science and Technology

*Enrollment Requirements:* A GPA of 2.00 or higher is required for all resident applicants and of 2.50 for nonresident applicants.

*Contact Information:*

School of Letters and Sciences  
<http://www.poly.asu.edu/saas/socialbehavioral/sbscpoly@asu.edu>  
SANCA 252  
480/727-1716

**Small Business (Minor) AGSMBMIN**

*Description:* The minor in small business is available to nonbusiness majors and consists of 18 credit hours, with five required courses and one business-related area course.

*Program Requirement:* A total of 18 credit hours must be completed from the following required courses:

- BUA 380 Small Business Leadership (3)
- BUA 381 Small Business Accounting and Finance (3)
- BUA 382 Small Business Sales and Market Development (3)
- BUA 383 Small Business Working Relationships (3)
- BUA 384 Small Business Operations and Planning (3)
- Business-related area course (3)

*Enrollment Requirements:* Please contact the department for more information:  
<http://www.poly.asu.edu/msma/bua/minor/>.

*Contact Information:*

Morrison School of Management and Agribusiness  
<http://www.poly.asu.edu/msma/undergrad/>  
morrisonsschool@asu.edu  
PRLTA 330  
480/727-1585

**Small Business (Minor) ECSMBMIN**

Program information not available at time of publication.

Not accepting new students.

*Contact Information:*

W. P. Carey School of Business  
<http://wpcarey.asu.edu/>

**Social and Behavioral Sciences (Minor) ASSBSMIN**

*Description:* The minor offers students an interdisciplinary focus across several fields of the social and behavioral sciences, including sociocultural anthropology, geography, political science, psychology and sociology.

*Program Requirement:* The minor consists of 18 credit hours, at least 12 credit hours of which must be in upper-division courses. All courses must be completed with a minimum grade of "C" (2.00). Students wishing to pursue a minor must meet with an SBS department advisor to construct a minor that reflects a particular area of specialty and interest.

Required Courses

- SBS 300 Interdisciplinary Approaches to Social and Behavioral Sciences, SB (3)
- SBS 302 Qualitative Methods (3) or SBS 303 Quantitative Methods (3)
- Electives\* (12)

\*Choose courses from at least two fields of social and behavioral sciences, including SBS and excluding internships or individualized instruction.

*Enrollment Requirements:* The minor in social and behavioral sciences is open to all undergraduate majors. However, students should consult with the advisors in the department of their major to determine if the minor is consistent with their educational goals. Please contact the division for more information and see [http://newcollege.asu.edu/programs/sbs/minor\\_certs/minor.shtml](http://newcollege.asu.edu/programs/sbs/minor_certs/minor.shtml).

*Contact Information:*

Division of Social and Behavioral Sciences - W  
<http://newcollege.asu.edu/divisions/sbs/>  
SBS.Dept@asu.edu  
FAB N 251  
602/543-6058

### **Social Welfare (Minor) LASSWMIN**

*Description:* The social welfare minor prepares students for work in human service settings where a fundamental knowledge of human relations is required, complements careers in journalism, communications, public administration, nursing and related fields and provides a foundation for students who seek to pursue an M.S.W. The minor enhances and broadens the ability of students to analyze complex family, individual and societal problems in the context of societal values, cultural diversity and other social and economic variables. The minor also contributes to students' understanding of society and social behavior, encourages critical thinking and helps develop communication skills.

*Program Requirement:* Students should:

1. Meet with a social welfare advisor prior to registration.
2. Complete 18 credit hours of graded course work (internship or independent study not applicable).
3. Take a minimum of 12 credit hours of upper division course work from the approved list.
4. Earn a grade of "C" (2.00) or higher for all classes in the minor.
5. Complete a minimum of 12 credit hours of resident credit at ASU.
6. Complete SWU 171 as the prerequisite for all upper-division SWU courses.
7. Maintain a cumulative GPA of 2.00 or higher.
8. Be at sophomore standing to take 300- or 400-level course.

Required courses:

SWU 171 Introduction to Social Work (3)  
SWU 291 Social Service Delivery Systems (3)  
SWU 432 Social Policy & Services (3)

Select three credit hours from the list below:

SWU 374 Diversity and Oppression in Social Work Context (3)  
SWU 498 Border Family and Community Asset Building Policies (3)  
SWU 457 Southwest Borderlands Immigration Issues (3)  
SWU 494 Immigrants and Refugees (3)  
SWU 494 Spanish for Human Services (3)  
SWU 455 Social Work Practice Skills with Latinos (3)  
SWU 498 Lesbian/Gay Issues (3)

Select six credit hours from the following list\*:

SWU 303 Micro Human Behavior Social Environment (3)  
SWU 340 Macro Human Behavior Social Environment (3)  
SWU 394 Arizona/National Government: A Policy Practice Perspective (3)  
SWU 498 Pro-Seminar (3)

\* Note: Student may select one additional course from the cultural diversity options above.

Lower-division credit hours required: 6

Upper-division credit hours required: 12

Total credit hours required: 18

*Contact Information:*

School of Social Work

<http://ssw.asu.edu>

[social.work@asu.edu](mailto:social.work@asu.edu)

UCENT 800

602/496-0800

**Sociocultural Anthropology (Minor) ASASBMIN**

*Description:* The minor is designed to provide students with a substantive understanding of the theoretical assumptions and methodological techniques underlying the field of sociocultural anthropology. Courses provide students with knowledge about and theoretical approaches to cross-cultural studies and transnational research, emphasizing culture and political economy in historical context. Specifically, students minoring in sociocultural anthropology will be expected to demonstrate knowledge and skill in the following areas:

- Critical thinking and analytical reasoning.
- Interpretation of cultural practices, social theory and social texts.
- Effective oral presentation and written communication.
- Qualitative research methods in anthropology and other social sciences and interpretive humanities, including ethnographic field research and library research.
- Anthropological approaches to and explanatory frameworks for the study of social issues in culture and political economy.

- Awareness of cultural, ethnic, gender, sexual, class and age differences and commonalities across world social formations.
- Application of theoretical knowledge to understanding sociocultural practices across local and global contexts.
- Development of their own anthropological perspective for use in their everyday lives and future studies or employment.

*Program Requirement:* The minor requires 18 credit hours, at least 12 of which must be in upper-division courses. Two courses, ASB 311 and SBS 302, are required. The remaining 12 credit hours may be drawn from ASB courses and from several key SBS courses in the interdisciplinary social science degree. All courses must be passed with a minimum grade of “C” (2.00) or higher. Up to six credit hours of lower-division courses and three credit hours of ASB 499 Individualized Instruction may also be applied toward the minor.

Required courses:

ASB 311 Principles of Social Anthropology, SB, G, H (3)  
SBS 302 Qualitative Methods (3)

Choose four from the following, for a total of 12 credits:

ASB 102 Introduction to Cultural and Social Anthropology, SB, G (3)  
ASB 211 Women in Other Cultures, HU/SB, G (3)  
ASB 311 Principles of Social Anthropology, SB, G, H (3)  
ASB 319 Indigenous Peoples of North America (3)  
ASB 339 Introduction to Social Movements, SB (3)  
ASB 340 Migration and Culture, SB, G (3)  
ASB 342 Mexico-U.S. Borderlands, SB (3)  
ASB 346 Marriage and Family Diversity, SB, C (3)  
ASB 350 Anthropology and Art, HU (3)  
ASB 353 Death and Dying in a Cross-Cultural Perspective, HU/SB, G (3)  
ASB 354 Culture and Politics of the Internet (3)  
ASB 356 Central American Studies, SB, G (3)  
ASB 389 Ethnographic Field Lab (1-6)  
ASB 394 Special Topics (1-4)  
ASB 411 Kinship and Social Organization (3)  
ASB 440 Women in the Global Factory, SB, G (3)  
ASB 441 Sexuality and Culture, SB, G (3)  
ASB 442 Urban Anthropology, SB (3)  
ASB 445 Globalization, Development, and Resistance, SB, G (3)  
ASB 447 Citizenship, Nationalism, and Identity, SB, G (3)  
ASB Electives (3)  
SBS 301 Cultural Diversity, L/SB, C (3)  
SBS 410 Topics in Identity/Difference, (3)  
SBS 430 Topics in Power/Knowledge, SB (3)

SBS 450 Topics in Local/Global, SB, G (3)  
SBS 460 Urban Studies SB (3)

*Enrollment Requirements:* The minor in sociocultural anthropology is open to all undergraduate majors. However, students should consult with the advisors in the department of their major to determine if the minor is consistent with their educational goals. Please contact the division for more information and see [http://newcollege.asu.edu/programs/sociocultural\\_anthropology/](http://newcollege.asu.edu/programs/sociocultural_anthropology/).

*Contact Information:*

Division of Social and Behavioral Sciences  
<http://newcollege.asu.edu/divisions/sbs/>  
SBS.Dept@asu.edu  
FAB N 251  
602/543-6058

### **Sociology (Minor) ASSOCMIN**

*Description:* The sociology program provides students with an understanding of theory, practice, and policy underlying issues of social change and of inequality and diversity from multiple perspectives, including race/ethnicity, gender, economic position, age, geographic location and position in the global political economy. The student minoring in sociology will learn how it enhances one's understanding of social realities and institutions at local, national and international levels, and how sociology contributes to the other social sciences and to the humanities. Students gain a basic understanding of the assumptions underlying the discipline of sociology and develop the research skills necessary for analysis of complex social issues. These objectives are met by offering a flexible program and by providing the student with individual and group experiences in working with faculty on concrete intellectual and policy issues.

*Program Requirement:* The minor in sociology requires 21 credit hours in sociology, nine of which must be upper-division.

### **Required Core**

SOC 101 Introductory Sociology, SB (3) or SOC 301 Principles of Sociology, SB (3)  
SBS 303 Quantitative Methods (3)  
SBS 304 Social Statistics I, CS (3) or SOC 486 Contemporary Theory, SB (3)

### **Sociology Electives (12)**

Courses must be chosen in consultation with the student's advisor.

*Enrollment Requirements:* The minor in sociology is open to all undergraduate majors. However, students should consult with the advisors in the department of their major to determine if the minor is consistent with their educational goals.

Please contact the division for more information and see  
[http://www.newcollege.asu.edu/programs/sociology/minor\\_cert/](http://www.newcollege.asu.edu/programs/sociology/minor_cert/)

*Contact Information:*

Division of Social and Behavioral Sciences  
<http://newcollege.asu.edu/divisions/sbs/>  
SBS.Dept@asu.edu  
FAB N 251  
602/543-6058

### **Sociology (Minor) LASOCMIN**

*Description:* A minor in sociology from the School of Social and Family Dynamics exposes students to the basic course work and issues within the discipline. This program provides an exceptional balance to studies in psychology, communication, education, business and nursing.

*Program Requirement:* 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 the Tempe campus. Required courses are:

SOC 101 Introductory Sociology, SB (3)  
SOC 391 Sociological Research, SB (3) or SOC 483 History of Social Thought,  
SB (3) or SOC 486 Contemporary Theory, SB (3)  
Four sociology electives

*Enrollment Requirements:* Students who wish to pursue a minor in sociology may do so with the permission of the department, school or college of their major as well as the advisor in the School of Social and Family Dynamics. An ASU student who is pursuing a degree at any ASU campus may elect to add a minor offered at any other ASU campus.

Please contact the school for more information and see  
<http://ssfd.clas.asu.edu/socminor>.

*Contact Information:*

School of Social/Family Dynamics  
<http://ssfd.clas.asu.edu/>  
ssfd@asu.edu  
SS 144  
480/965-6978

### **Spanish (Minor) ASSPAMIN**

*Description:* The Spanish program consists of three emphases: language, literature and cultures. These emphases are integrated within the discipline and with other disciplines within the New College of Interdisciplinary Arts and Sciences. Spanish classes are taught through an intensive language approach using the most recent

electronic technologies, including videos, CD-ROMs, electronic chat groups and news groups devoted to Hispanic literature and culture.

The program also allows credit for internships in social and business agencies. This school-to-work experience, in addition to offering the student possible entry-level job opportunities, provides stimulating linguistic and cultural rewards outside of the campus environment.

*Program Requirement:* The minor in Spanish consists of 20 credit hours of Spanish course work, of which 12 credit hours must be in the upper division. All Spanish course work must be completed with a minimum grade of "C" (2.00) or higher.

Complete the following courses, eight credits total:

SPA 201 Intermediate Spanish, G (4)

SPA 202 Intermediate Spanish, G (4)

Electives, 12 credits total:

The SPA elective courses must be at the 300 or 400 level and chosen in consultation with a department program advisor.

*Enrollment Requirements:* Students wishing to pursue the Spanish minor should consult an academic advisor in the unit offering that minor to ensure that the appropriate set of courses is taken, to sign the minor check sheet, and to have the minor added to their program of study. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major recognizes the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

Division of Humanities, Arts, and Cultural Studies

[http://newcollege.asu.edu/programs/spanish/minor\\_certs/minor.shtml](http://newcollege.asu.edu/programs/spanish/minor_certs/minor.shtml)

harcs.dept@asu.edu

FAB N 290

602/543-4444

### **Spanish (Minor) LASPAMIN**

*Description:* Students pursuing a minor in Spanish gain an understanding of the language, literature, and cultures of Spanish speaking peoples and regions. There

are opportunities to partake in study abroad programs, which can serve to enhance a student's minor experience and education.

*Program Requirement:* The minor in Spanish requires a minimum of 18 upper-division credit hours. Course substitutions are allowed for heritage and advanced speakers of the language.

Required courses are:

- SPA 325 Introduction to Hispanic Literature, HU (3)
- SPA 412 Advanced Conversation and Composition, G (3)

Choose two of the following courses (6):

- SPA 425 Spanish Literature (to 1700), HU (3)
- SPA 426 Spanish Literature (from 1700), HU (3)
- SPA 427 Spanish American Literature (to 1880), L (3)
- SPA 428 Spanish American Literature (from 1880), L, G (3)
- SPA 464 Mexican American Literature, HU (3)

Choose one of the following courses (3):

- SPA 471 Civilization of the Spanish Southwest, L/HU, C (3)
- SPA 472 Spanish American Civilization, HU, G, H (3)
- SPA 473 Spanish Civilization, HU/SB, G (3)

Choose one from the following courses (3):

- SPA 394 Special Topics (3)
- SPA 413 Advanced Spanish Grammar (3)
- SPA 429 Mexican Literature (3)
- SPA 434 Drama of the Golden Age (3)
- SPA 435 Cervantes (3)

*Enrollment Requirements:* Students who wish to add the minor in Spanish to the degree they are currently pursuing may do so if approved by the major department, school or college. Please contact the School of International Letters and Cultures for more information.

*Contact Information:*

School of International Letters and Cultures  
<http://silc.asu.edu/undergraduate/majors-minors-certs>  
[silcadvising@asu.edu](mailto:silcadvising@asu.edu)  
LL 440  
480/965-6281

**Spanish for Native Speakers (Minor) LSPANMIN**

Program information not available at time of publication.

Not accepting new students.

*Contact Information:*

<http://clas.asu.edu>

**Special Events Management (Minor) HSEVNMIN**

*Description:* The minor in special events management is designed to offer students a solid understanding of special event programming and management. In addition to the two-tiered special event courses, which provide basic and advanced instruction, as well as experiential learning opportunities through event production, each student will be able to select electives to meet his or her specific interests.

*Program Requirement:* The minor consists of six credit hours of required courses and 12 credit hours of electives, selected in consultation with a faculty advisor. To earn the minor, students must complete all course work in the minor with a minimum grade of "C" (2.00) or higher. Recreation and tourism management majors are not eligible to earn the minor in special events management.

Required Core Courses

RTM 486 Special Events Management (3)

RTM 487 Special Events Management, Advanced (3)

Electives\*

Choose four courses from the following, for a total of 12 credits:

RTM 301 Leadership in Recreation and Tourism (3)

RTM 303 Programming Recreation and Tourism Services (3)

RTM 304 Recreation and Tourism Areas and Facilities Management, L (3)

RTM 373 Leisure Travel and Tourism, SB (3)

RTM 394 Meeting and Convention Planning (3) or D TDM 345 Meeting and Convention Planning (3)

RTM 403 Professional Development Seminar (3)

RTM 404 Marketing Recreation and Tourism (3)

RTM 451 Grant Writing for Human Service Professionals (3)

RTM 453 Volunteer Management in Human Service Organizations (3)

RTM 458 International Tourism, G (3)

RTM 475 Entrepreneurial Recreation and Tourism (3)

RTM 484 Senior Internship (3)

\* Select from these or other approved courses in consultation with the minor advisor.

*Enrollment Requirements:* Please contact the department for more information.

*Contact Information:*

School of Community Resources and Development

<http://scrd.asu.edu>

scrd@asu.edu

UCENT 500

602/496-0550

**Speech and Hearing Science (Minor) LASHSMIN**

*Description:* The Department of Speech and Hearing Science offers an undergraduate minor in speech and hearing science. This is an academic program with emphasis on normal aspects of speech, language and hearing.

*Program Requirement:* For your information, the required courses are listed below, but students are strongly encouraged to visit an advisor from the Department of Speech and Hearing Science at ASU. The minor in speech and hearing science consists of 24 credit 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 following:

SHS 367 Language Science, SB (3)

SHS 375 Speech Science (3)

SHS 376 Psychoacoustics (3)

The remainder of the credits must come from the following courses:

SHS 401 Introduction to Audiology (3)

SHS 402 Modifying Communicative Behavior (3)

SHS 465 Speech and Language Acquisition, SB (3)

SHS 470 Developmental Speech and Language Disorders (3)

SHS 485 Acquired Speech and Language Disorders (3)

SHS 496 Aural Rehabilitation (3)

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major.

Please contact the department for more information at <http://shs.asu.edu/ug-minor>.

*Contact Information:*

Department of Speech and Hearing Science  
<http://shs.asu.edu/>  
shsadvise@asu.edu  
COOR 2211  
480/965-2374

### **Statistics (Minor) LASTAMIN**

*Description:* The minor in statistics is recommended for students majoring in a variety of disciplines such as physics, engineering applications, business, economics, and in the life and social sciences where the need for quantification in the analysis of phenomena is strong.

*Program Requirement:* The minor in statistics consists of a minimum of 18-20 credit hours. Required courses include:

MAT 271 Calculus with Analytic Geometry II, MA (4) or MAT 266 Calculus for Engineers II (3)  
MAT 272 Calculus with Analytic Geometry III, MA (4) or MAT 267 Calculus for Engineers III (3)  
MAT 300 Mathematical Structures (3)  
STP 420 Introductory Applied Statistics (3)  
STP 421 Probability (3)  
STP 427 Mathematical Statistics (3) or STP 429 Experimental Statistics CS (3)

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.

2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

School of Mathematical and Statistical Sciences  
<http://math.asu.edu/>  
math@asu.edu  
PS A 211  
480/965-7195

### **Theatre (Minor) FATHEMIN**

*Description:* Students pursuing the theatre minor will study the literatures, histories and basic production practices of theatre while having opportunities to concentrate in an area such as theatre and performance studies, directing and performance, design and production, new work development or theatre for youth.

*Program Requirement:* The school offers a minor in theatre consisting of 22 credit hours of course work. A grade of "C" (2.00) or higher is required for all courses in the minor. All prerequisites for the minor courses must be met (see course listings). Transfer students may transfer up to nine credit hours toward the minor.

The following courses are required, for a total of 13 credit hours:

- FMP 201 Film: The Creative Process I, HU (3)\*
- THE 100 Introduction to Theatre, HU (3)
- THE 322 Theatre History and Culture, HU, H (3)
- THP 101 Acting: An Introduction (3)
- THP 201 Theatre Production Crew (1)

Also required are nine credit hours of course work within the same curricular area. Contact the school for options and course requirements.

\* Students considering a minor in film concurrently must complete an additional course in theatre or film to make up for the overlapping FMP 201 course.

Courses ordinarily limited to majors only are available to minors on a second-priority basis; that is, minors may not register for these courses early, but are allowed to register after all majors' needs have been met.

*Enrollment Requirements:* Contact the Herberger Institute for Design and the Arts advising office for information at <http://theatre.asu.edu/students/current/undergrad-minors.php>.

*Contact Information:*  
School of Theatre and Film  
<http://theatrefilm.asu.edu>  
[theatre@asu.edu](mailto:theatre@asu.edu)  
GHALL 232  
480/965-5337

#### **Tourism (Minor) PPTRMMIN**

Program information not available at time of publication.

Not accepting new students.

*Contact Information:*  
College of Public Programs  
<http://copp.asu.edu/>

#### **Tourism Development and Management (Minor) PPTDMMIN**

*Description:* The minor in tourism development and management program provides students with the planning and development skills needed to enter the largest industry in the world. Exposure to the businesses of nature-based tourism, heritage tourism and meeting and convention planning will begin to prepare students for successful careers in the fast-growing travel and tourism industry. According to both the World Tourism Organization and the World Travel Tourism Council, the travel and tourism industry is the largest industry and employer in the world. It is the third largest industry in the United States and ranks as the second largest industry in Arizona.

The minor allows students enrolled in other undergraduate programs at ASU to broaden their educational experiences. Students from such various disciplines including business, communication and many others find this program a beneficial supplement to their existing program. Having completed the minor in tourism development and management, a student may also complete a certificate in convention sales and meeting planning. For more information, access the school's Web site at <http://scrd.asu.edu/portal/ia/certificate-programs-1/>. Students may also choose to complete a study abroad program.

*Program Requirement:* Completion of a tourism minor in the School of Community Resources and Development requires following:

1. TDM 205.
2. TDM 325.
3. TDM 415.
4. Fifteen hours of graded classroom course work (no internship, no independent study).
5. Nine hours of course work at the upper division level, from the approved list.
6. A minimum "C" (2.00) grade required for all classes in the minor.
7. No double counting of courses for both a major and the minor.

### **Standards**

1. A minimum GPA of 2.00 for those pursuing the minor, a major or pre-major, other than tourism development and management.
2. Must be a junior to take 400-level courses.

### **Course Selection** (approved list)

#### **Required courses**

1. TDM 205 Introduction to Travel and Tourism, G (3).
2. TDM 325 Tourism Accommodations, prerequisites: must have completed REC305 or TDM205 with a grade of "C" (2.00) or higher or be currently enrolled (3).
3. TDM 415 Tourism Transportation Systems, prerequisites: must have earned grade of "C" (2.00) or higher in REC 305 or TDM 205 or be currently enrolled (3).

Choose two courses from the list below:

- PRM 120 Leisure and the Quality of Life, SB (3)
- TDM 345 Meeting and Convention Planning (3) (prerequisites: must have completed REC 305 or TDM 205 with a grade of "C" (2.00) or higher or be currently enrolled)
- TDM 350 Tourism Marketing (3) (prerequisites: TDM 205 (or REC 305) with a grade of "C" (2.00) or higher or be currently enrolled; must have completed at least 45 hours)
- TDM 386 Convention and Sales Management (3)
- TDM 448 Heritage and Cultural Tourism (3) (prerequisites: must have completed PRM 120 or REC120 with a grade of "C" (2.00) or higher or be currently enrolled)
- TDM 458 International Tourism (3)
- TDM 480 Nature Based Tourism (3) (prerequisite: PRM 120 or TDM 205)
- TDM 494 Special Topics (this course requires CRD advisor approval)
- PRM 475 Entrepreneurial Recreation and Tourism (3) (prerequisites: must have earned grade of "C" (2.00) or higher in PRM 120 or REC 120 or be

currently enrolled)  
PRM 380 Wilderness and Parks in America, SB, H (3)  
PRM 486 Special Event Management (3)

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Students pursuing a B.S. in tourism development and management are not eligible to complete this minor.

*Contact Information:*  
College of Public Programs  
<http://scrd.asu.edu>  
[scrd@asu.edu](mailto:scrd@asu.edu)  
UCENT 550  
602/496-0550

### **Tourism Management (Minor) HSTOUMIN**

*Description:* The minor in tourism management is designed to provide students with fundamental knowledge in travel and tourism management. The minor may be useful to students pursuing degrees in communication studies, criminal justice and criminology, global business, interdisciplinary arts and performance and Spanish.

*Program Requirement:* The minor consists of 18 credit hours, of which 15 credit hours must be at the upper-division level. To earn the minor, students must complete all courses with a minimum grade of "C" (2.00). Recreation and tourism management majors are not eligible to earn the minor in tourism management.

Required Core Courses

Choose two from the following, for a total of six credits:

- RTM 373 Leisure Travel and Tourism, SB (3)
- RTM 458 International Tourism, G (3)
- RTM 475 Entrepreneurial Recreation and Tourism (3)

Electives

Choose four courses from the following, for a total of 12 credits:

- RTM 303 Programming Recreation and Tourism Services (3)
- RTM 304 Recreation and Tourism Areas and Facilities Management, L (3)
- RTM 360 Policy, Planning, Development of Recreation and Tourism Resources (3)
- RTM 401 Administration of Recreation and Tourism Services (3)
- RTM 404 Marketing Recreation and Tourism (3)
- RTM 458 International Tourism, G (3)\*
- RTM 475 Entrepreneurial Recreation and Tourism (3)\*
- RTM 486 Special Events Management (3)
- RTM 494 Sustainable Tourism Management (3)

Select courses in consultation with the minor advisor (an other approved course may be lower-division).

\*Course may be taken as an elective if not selected to fulfill core requirement.

*Enrollment Requirements:* Please contact the department for more information.

*Contact Information:*

School of Community Resources and Development  
<http://scrd.asu.edu>  
scrd@asu.edu  
UCENT 500  
602/496-0550

### **Transborder Chicana/o & Latina/o Studies (Minor) LACCSMIN**

*Description:* The Department of Transborder Chicana/o and Latina/o Studies offers an interdisciplinary degree program whose central mission is to provide a value-added environment that increases the direct participation of Chicana/o and Latina/o populations in the formation of human and capital development.

The program offers students a fundamental understanding of the many dimensions of transnational and transborder processes. These include giving students the knowledge necessary to understand the manner in which Chicana/o, Mexican and Latina/o populations are influenced by and also negotiate political, social, cultural and linguistic borders of multiple sorts.

An equally important dimension is the preparation of students to effectively function in transnational and transborder contexts and processes. Graduates will be able to traverse political borders because capital expansion is practically unlimited in time and space. Students gain skill at developing literary, policy and applied projects that benefit their communities and regions. The department's intellectual mission embraces both material, cultural and applied approaches to the study of transborder and transnational phenomena.

*Program Requirement:* The transborder Chicana/o and Latina/o studies minor requires 18 credit hours of TCL course work.

### Core Requirements

TCL 201 Transborder Society and Culture of Mexican Origin and Latina/o Populations I (3) or TCL 202 Transborder Society and Culture of Mexican Origin and Latina/o Populations II (3)  
TCL 332 Mexican American History Since 1900 (3) or TCL 331 Mexican American History to 1900 (3)

It is recommended that students completing TCL 201 take TCL 332, and those completing TCL 202 take TCL 331.

Students must take the remaining 12 credit hours in upper-division TCL courses in concentrations of their choice.

*Enrollment Requirements:* Students who wish to pursue a minor in transborder Chicana/o and Latina/o studies may do so with the permission of the department, school or college of their major as well as the advisor in the Department of Transborder Chicana/o Latina/o Studies. An ASU student who is pursuing a degree at any ASU campus may elect to add a minor offered at any other ASU campus.

Please contact the department for more information.

#### *Contact Information:*

Department of Transborder Chicana/o & Latina/o Studies  
<http://transborder.clas.asu.edu>  
[tcls.info@asu.edu](mailto:tcls.info@asu.edu)  
COOR 6633  
480/965-5091

### **Urban and Metropolitan Studies (Minor) PPURBMIN**

*Description:* The minor in urban and metropolitan studies offers students interested in the urban environment the opportunity to explore the wide variety of issues that influence the quality of life in urban communities. Students are encouraged to learn about cities as historical, social, cultural, economic and political phenomena in order

to gain a strong understanding of the complex relationships that contribute to the problems and opportunities of urban living. As the population in the state's urban areas continues to grow, so will the demand for leaders who are skilled in new and innovative ways with which to address the challenges such growth generates. The program allows students enrolled in other undergraduate programs at ASU to broaden their educational experiences. Students from such various disciplines including planning, business, political science, nonprofit management and leadership, communication, social work, geography and many others might find this program a beneficial supplement to their existing program.

*Program Requirement:*

1. Fifteen hours of course work with a "C" (2.00) or better in each course.
2. Nine hours of upper-division course work from the approved list.
3. Twelve hours of residence credit at ASU. Eligibility to pursue the minor requires a major or pre-major other than urban and metropolitan studies.

**Required Courses**

URB 100 Introduction to Urban and Metropolitan Studies (3) or URB 300 Urban and Metropolitan Studies (3)  
URB 105 Introduction to Urban Governance (3) or URB 305 Urban Governance (3)

Core Courses (choose two of the following):

URB 220 Introduction to Urban America (3)  
URB 240 Urban Policy (3)  
URB 301 Urban Research (3)  
URB 302 Urban Research II (3)  
URB 410 Urban Leadership and Collaborative Skills (3)

**Urban Electives** (select a combination of the following)

Related Urban Topics and other approved courses (see below) (3)

Students will be able to choose from a variety of related urban topics classes offered by the School of Public Affairs. Possible topics include:

Leadership and Change  
Leadership and Communication  
Policy Analysis and Evaluation  
Urban Economics  
Political Economy  
Computer Applications  
Community Building and Development  
Regionalism

Poverty and Social Welfare Policy  
Comparative Urbanism

In addition, students can choose related courses offered by the School of Public Affairs or other departments.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information at <http://spa.asu.edu/urban/minor.htm>.

*Contact Information:*  
College of Public Programs  
<http://spa.asu.edu>  
[spa@asu.edu](mailto:spa@asu.edu)  
UCENT 400  
602/496-0450

**Urban Planning (Minor) ARPUPMIN**

*Description:* The planning minor introduces students to the field of urban planning. Students can select courses that include comprehensive planning, socioeconomic and environmental analysis, computer and analytical methods, planning law, site planning, urban design, and public-policy formulation and administration. Many students continue to specialize in planning at the graduate level. Students in planning are exposed to the theories, methods, and practices of the profession.

*Program Requirement:* A minimum of 18 credit hours are required for the minor, 12 of which must be from 300 or 400 level courses.

Required Course: PUP 301 Introduction to Urban Planning Select

The remaining 15 credit hours (nine of which must be from 300- or 400- level courses) must be chosen from the following courses:

- PUP 100 Introduction to Environmental Design, HU, G, H (3)
- PUP 190 Sustainable Cities, HU/SB, G (3)
- PUP 200 The Planned Environment, HU, H (3)
- PUP 363 History of Planning (3)
- PUP 412 History of the City (3)
- PUP 425 Urban Housing Analysis (3)
- PUP 430 Transportation Planning and the Environment (3)
- PUP 432 Planning and Development Control Law (3)
- PUP 442 Environmental Planning (3)
- PUP 444 Preservation Planning (3)
- PUP 445 Women and Environments, C (3)
- PUP 475 Environmental Impact Assessment (3)
- PUP 485 International Field Studies in Planning, G (3)

The minor is open to students of all majors. Students must, however, have an overall GPA of 2.50 or higher and achieve a minimum 2.50 GPA in minor classes to be awarded the minor.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information:  
<http://design.asu.edu/students/minors.shtml>.

*Contact Information:*

School of Geographical Sciences and Urban Planning

<http://design.asu.edu/planning>

[design.advising@asu.edu](mailto:design.advising@asu.edu)

CDN 162

480/965-7167

**Wellness Foundations (Minor) ECWFNDMIN**

*Description:* The Department of Exercise and Wellness offers this minor program to any ASU student interested in learning about health and wellness. Students will develop a greater understanding of wellness behaviors, healthy lifestyles and disease prevention.

*Program Requirement:* The minor in wellness foundations consists of 18 credit hours. The minor requires that students complete the following courses with a grade of "C" (2.00) or higher:

EXW 300 Foundations of Exercise and Wellness (3)

EXW 325 Fitness for Life (3)

EXW 342 Health Behavior Change (3)

EXW 450 Cultural and Social Issues in Exercise and Wellness (3)

EXW electives: six credit hours must be selected from the approved list of electives available in the Department of Exercise and Wellness.

*Enrollment Requirements:* Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if:

1. The college and/or department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met.
2. The college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major allows the recognition of the minor.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but are not limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major. Please contact the department for more information.

*Contact Information:*

College of Nursing and Health Innovation

<http://www.poly.asu.edu/saas/wellness/degree/undergraduate/minor/>

**Women and Gender Studies (Minor) LAWSTMIN**

*Description:* The minor in women and gender studies provides students with an intensive interdisciplinary liberal arts education that enables them to write well, think critically and analyze problems effectively. 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.

*Program Requirement:* The women and gender studies minor consists of 18 credit hours, 12 of which must be in the upper division. Students take one of the following courses:

WST 100 Women and Society, SB, C (3)

WST 300 Women in Contemporary Society, SB, C (3)

Students choose one from the following courses:

WST 377 History of American Feminist Thought, C (3)

WST 378 Global Feminist Theory, L, C (3)

WST 380 Gender, Race and Class, L or SB, C (3)

Twelve additional credit hours of approved women and gender studies courses must be taken after consultation with the women and gender studies advisor. Students pursuing a minor must register at least one semester before graduation and are encouraged to meet with the women and gender studies advisor early in their course of studies.

*Enrollment Requirements:* Students who wish to pursue a minor in women and gender studies may do so with the permission of the department, school or college of their major as well as the advisor in the School of Social Transformation. An ASU student who is pursuing a degree at any ASU campus may elect to add a minor offered at any other ASU campus.

Please contact the School of Social Transformation for more information.

*Contact Information:*

School of Social Transformation

<http://wgs.asu.edu/>

[wgs.asutempe@asu.edu](mailto:wgs.asutempe@asu.edu)

WHALL 205

480/965-2358

## Women's Studies (Minor) ASWSTMIN

*Description:* The minor in women's studies within the New College of Interdisciplinary Arts and Sciences is an interdisciplinary program emphasizing intersectional approaches to the study of gender, race, class, ethnicity and sexuality in national and transnational contexts.

*Program Requirement:* The women's studies minor consists of 18 credit hours of course work. Students are required to choose three courses (nine credit hours) from the following core: WST 100 or WST 300; WST 350, WST 376, WST 457 or WST 498. Additionally, students are required to select one course in three of the following four areas:

- Global perspectives.
- Representation and culture studies.
- Gender studies.
- Applied women's studies.

### **Core Requirements:**

WST 100 Women and Society, SB, C (3) or WST 300 Women in Contemporary Society, SB, C (3)

Choose two of the following courses, six credits total:

WST 350 Race, Class and Gender, SB, C (3)

WST 376 Feminist Theory, L, C (3)

WST 457 Women, Cultures and Societies, SB, G (3)

WST 498 PS: Theory and Method in Women's Studies, L (3)

### **Additional Requirements** (nine credit hours):

Select one course in three of the following four areas:

#### **Global Perspectives Courses**

WST 330 Women on the Borderlands (3)

WST 390 Women and World Religions, L/SB, G (3)

WST 475 Women of the Diaspora Across Cultures, HU, G (3)

WST 483 Women writers Across Cultures, HU, G (3)

WST 487 Gender and International Development, SB, G (3)

#### **Representation and Culture Studies Courses**

WST 320 Women in Popular Culture, HU, C (3)

WST 370 Chronicling Women's Lives, HU, C (3)

WST 431 Women and Film, L, G (3)

WST 467 Ethnic Women Writers, L/HU, C (3)

WST 473 Latina/Chicana Representation, SB, C

## **Gender Studies Courses**

WST 276 Feminist foundations: Going to the Sources, H (3)  
WST 333 Critical Perspectives on Sexuality, SB, C (3)  
WST 444 Women and Health, SB (3)

## **Applied Women's Studies Courses**

WST 482 Gender Issues in Education, (3)  
WST 484 Internship, (3)  
WST 485 Women, Gender and Leadership, SB, C (3)  
WST 499 Individualized Instruction (3)

*Enrollment Requirements:* The minor in women's studies is open to all undergraduate majors. However, students should consult with the advisors in the department of their major to determine if the minor is consistent with their educational goals. Students are encouraged to take courses outside their major and college. Please contact the department for more information.

### *Contact Information:*

Division of Humanities, Arts, and Cultural Studies  
[http://newcollege.asu.edu/programs/womens\\_studies/minor\\_cert/harcs.dept@asu.edu](http://newcollege.asu.edu/programs/womens_studies/minor_cert/harcs.dept@asu.edu)  
FAB N279  
602/543-4444

## **Youth Services Leadership (Minor) HSYSLMIN**

Not accepting new students.

*Description:* The minor in youth services leadership is designed to explore the area of youth leadership from the perspective of those who work face-to-face with youth in a variety of settings.

*Program Requirement:* The minor consists of 12 credit hours of core courses and six hours of electives. To earn the minor, students must complete all course work in the minor with a minimum cumulative GPA of 2.00 or higher and all courses with a minimum grade of "C" (2.00) or higher.

## **Required Core Courses**

RTM 301 Leadership in Recreation and Tourism (3)  
RTM 303 Programming Recreation and Tourism Services (3)  
RTM 394 ST: Recreation and Leisure Services for Youth Development (3)  
RTM 454 Human Services for At-Risk Youth (3)

## **Electives**

Choose two courses from the following, for a total of six credits:

- CRJ 340 Juvenile Justice (3)
- CRJ 441 Prevention of Crime and Delinquent Behavior (3)
- CRJ 462 Gangs (3)
- IAP 331 Performance, Acting, and the Individual (3)
- IAP 347 Movement in Education (3)
- PGS 341 Developmental Psychology (3)
- PGS 443 Abnormal Psychology (3)
- RTM 302 Recreation and Tourism for Diverse Populations, C (3)
- RTM 345 Team Building Strategies (3)
- RTM 451 Grant Writing for Human Service Professionals (3)
- RTM 484 Senior Internship (3)
- RTM 494 ST: Leadership and Professional Development in Youth Services (3)
- SOC 340 Sociology of Deviant Behavior, SB (3)
- SPE 222 Orientation to Education in Exceptional Children, SB (3)
- SPE 322 Behavior Management and Consultation (3), instructor approval required

Select courses in consultation with an recreation and tourism management faculty advisor. Courses may have prerequisites. See course description.

*Enrollment Requirements:* Please contact the department for more information.

*Contact Information:*

School of Community Resources and Development  
<http://scrd.asu.edu>

### **Zoology (Minor) LAZOLMIN**

Program information not available at time of publication.

Not accepting new students.

*Contact Information:*

College of Liberal Arts and Sciences  
<http://clas.asu.edu>

## Undergraduate Programs

### Undergraduate Certificates (Program Descriptions and Requirements)

#### African and African American Studies (certificate) LAAFRCERT

*Description:* The African and African American Studies Program offers an interdisciplinary examination of the many ways in which African and African-descended peoples have created robust lives for themselves and, in turn, contributed to the creation of the modern world.

The program's mission is advanced by its core undergraduate curriculum that examines the culture, arts, history, politics, economics and current status of African Americans, Africans and the African Diaspora everywhere, especially in the Caribbean, Central America and South America.

The curriculum combines a research-based understanding of the humanities, social and behavioral sciences and the arts with practical applications (internships, community/civic engagement and research projects) to prepare students for lifelong learning, advanced study in a variety of fields, and successful careers and productive public service in an increasingly diverse society, especially in Arizona.

*Program Requirement:* The certificate requires 24 credit hours. Fifteen core hours must be taken from the following courses:

- AFH 353 African American Literature: Beginnings Through the Harlem Renaissance, L/HU, C (3) or AFH 354 African American Literature: Harlem Renaissance to the Present, L/HU, C (3)
- AFR 210 Introduction to African American Studies, C (3)
- AFR 429 African American Studies Theory and Methods (3)
- AFS 363 African American History to 1865, SB, C, H (3)
- AFS 364 African American History Since 1865, SB, C, H (3)

In addition, one course from each of the three concentrations (i.e., social and behavioral sciences, humanities/arts, politics and society) must be taken. These courses are in addition to the required core courses. Courses should be selected in consultation with the major advisor.

*Enrollment Requirements:* Any student admitted to study at ASU may complete a certificate. To apply to the university, please complete the Office of Admissions online application. Please contact the School of Social Transformation for more information.

*Contact Information:*

School of Social Transformation

<http://aaas.clas.asu.edu/>  
aframstu@asu.edu  
WILSN 140  
480/965-4399

### **Arabic Studies (certificate) LAARBCERT**

*Description:* The certificate in Arabic studies provides students with skills that will enable and qualify them to communicate effectively in Arabic in the four areas of language acquisition: speaking, listening, reading and writing. Simultaneously, students gain a broad knowledge and understanding of the culture, literature and traditions of the vast Arabic-speaking world.

The certificate provides critically needed educational and cultural diversity that will enrich students' undergraduate experience and prepare them for life as employees and employers.

Graduate students in the liberal arts, social sciences and humanities seeking academic or professional careers in any of the three disciplines or thematic concentrations are also expected to be attracted to this certificate because of the added advantage the program gives them in the job market given the demonstrably high need for graduates with Arabic knowledge.

*Program Requirement:* ASU students admitted to a degree program in any field of study would be eligible for the Arabic studies certificate program. In addition to the course work and examinations required in the major field of interest, students are responsible for fulfilling the minimum requirement of 18 hours to earn the Arabic studies certificate. These hours can be chosen in consultation with the certificate coordinator. A minimum grade of "C" (2.00) or higher is required in each course.

*Enrollment Requirements:* Students must first be accepted into an appropriate degree program at ASU and will then apply directly to the director of the Arabic studies certificate in the School of International Letters and Cultures for admission into the certificate program.

The application will consist of:

1. Name.
2. Address.
3. Phone number.
4. E-mail address.
5. Student ID number.
6. Major.
7. Year in college.
8. Anticipated graduation date.
9. Name of their major academic advisor.

Please contact the department for more information:  
<http://www.asu.edu/clas/silc/academics/>.

*Contact Information:*

School of International Letters and Cultures  
<http://silc.asu.edu/undergraduate/certificates>  
silc@asu.edu  
LL 440  
480/965-6281

**Asian Pacific American Studies (certificate) LAAPACERT**

*Description:* Asian Pacific American studies is an interdisciplinary undergraduate curriculum in the School of Social Transformation that addresses the historical and contemporary experiences of Asian Americans and Pacific Islanders, what they have contributed to our society, and the complexity of racial formations in the U.S.

The curriculum is designed to help students of all ethnicities: to think critically, develop clear written arguments, and present their perspectives effectively, to learn about Asian American and Pacific Islander experiences and communities in Arizona, nationally, and within a larger global context, and to prepare students to participate in an increasingly diverse and global U.S. society.

The certificate program provides students with opportunities to think critically about interethnic cooperation and conflict in the formation of social institutions and communities. The certificate program also encourages students to learn about local Asian American and Pacific Islander communities and organizations through research, courses and community internships.

*Program Requirement:* Course Requirements: The certificate program requires 18 credit 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 (3) or APA 494 ST: Asian Pacific American Communities (3)

The remaining six credit hours must be filled by courses from an approved list, including any additional courses with an APA prefix, as well as COM 263 and MCO 460. Students must apply for the certificate program through the School of Social Transformation.

*Enrollment Requirements:* Students admitted to study at Arizona State University are eligible to pursue the requirements of a certificate. In order to be admitted to the university, complete the Office of Admission online application. Please contact the

School of Social Transformation for more information and see <http://apas.clas.asu.edu/program/certificate.shtml>.

*Contact Information:*

School of Social Transformation  
<http://apas.clas.asu.edu/>  
apas@asu.edu  
WILSN  
480/965-9711

**Asian Studies (certificate) LAASNCERT**

*Description:* The Asian studies certificate is offered through the Center for Asian Research. It supplements a bachelor's degree, demonstrating knowledge of an Asian language as well as general knowledge of Asian history, art, culture and society. The certificate provides students with official transcript recognition of specialization in Asian Studies related to their major area of study. An earned certificate will appear on student transcripts as an Asian study emphasis.

*Program Requirement:* The certificate curriculum includes 24 credit hours of course work:

1. Fifteen credit hours of upper-division area studies course work in at least three disciplines outside of languages and literature courses (such as anthropology, art, geography, history, political science and religious studies).
2. Nine additional credit hours may be some combination of lower- and/or upper-division courses.
3. Six hours may be satisfied with language and literature courses limited to 321 and above.

In addition, certificate students must demonstrate proficiency in an Asian language at the intermediate level. The language requirement can be satisfied by completing the 201 and 202 sequence, one year of study abroad at the intermediate level, or satisfactory placement on a proficiency exam. Asian languages include Chinese, Hindu/Urdu, Indonesian, Japanese, Korean, Thai and Vietnamese.

Students pursuing an Asian studies certificate may apply courses in East, South and/or Southeast Asia to meet the certificate requirements. A minimum grade of "C" (2.00) is required for each course that is used to fulfill the certificate requirements.

*Enrollment Requirements:* There are no specific admission requirements other than a student's desire to learn about Asia. Please contact the department for more information and see [http://www.asu.edu/clas/asian/certificate\\_undergrad.html](http://www.asu.edu/clas/asian/certificate_undergrad.html).

*Contact Information:*

Dean, College of Liberal Arts and Sciences  
<http://www.asu.edu/clas/asian/car@asu.edu>

COOR 6th  
480/965-7184

### **Automotive Entrepreneurs and Leaders (certificate) BADMGCERT**

*Description:* Students gain the knowledge and basic skills necessary to enter a career in automotive management both at the corporate level and at retail dealerships. These skills include hiring and managing personnel, coordinating teams, understanding consumers and human behavior, managing financing and cash flow, handling vehicle inventory, managing customer service operations and managing automobile marketing efforts.

*Program Requirement:* Students must complete a bachelor's degree from the W. P. Carey School of Business and complete a minimum of 15 credit hours of approved course work, including the following six hours:

MGT 494 Special Topics: Dealership Management (3)  
MGT 494 Special Topics: Human Resources in the Automotive Industry;  
Customer Service and Loyalty in the Automotive Industry; and Accounting  
and Finance in the Automotive Industry (3)

To complete the certificate, students select at least nine additional hours of business courses, including a three-credit-hour internship. Courses must be approved in advance by the faculty director for the certificate program. The student must complete the 15 credit hours of course work with grades of "C" (2.00) or higher.

*Enrollment Requirements:* Although classes are not closed to other students, space in the certificate for automotive entrepreneurs and leaders program is limited and based on available resources. Students must submit an application. Admission criteria include GPA, career goals and application materials. Please contact the department for more information and see <http://wpcarey.asu.edu/cael>.

#### *Contact Information:*

Dean, W.P. Carey School of Business  
<https://wpcarey.asu.edu>  
wpcareyug@asu.edu  
BA 109  
480/965-4227

### **Child Nutrition (certificate) ECNTRCERC**

*Description:* This certificate program is directed toward current degree-seeking students, postbaccalaureate students and nondegree-seeking students who are seeking eligibility for the school nutrition specialist (SNS) credential offered by the School Nutrition Association.

*Program Requirement:* The certificate requires that students take the following courses, for a total of 31 credit hours:

BUA 381 Small Business Accounting and Finance (3)  
EXW 100 or 325 Intro to Wellness or Fit for Life (3)  
NTR 142 Applied Food Principles (3)  
NTR 343 Food Service Purchasing (3)  
NTR 344 Nutrition Services Management (3)  
NTR 345 Development of Healthy Cuisines (3)  
NTR 401 Field Experience (3)  
NTR 445 Management of Food Service Systems (3)  
NTR 448 Community Nutrition (3)  
NTR 450 Nutrition in the Lifecycle I (3)  
NTR 498 Seminar in Child Nutrition Programs (1)

*Enrollment Requirements:* To enroll in the certificate program, the applicant must be admitted to ASU as a degree-seeking or nondegree-seeking student in the Department of Nutrition. The curriculum committee of the Department of Nutrition will approve applications to the certificate program.

*Contact Information:*

College of Nursing & Health Innovation  
<http://www.poly.asu.edu/saas/nutrition/nutrition@asu.edu>  
HSC 1386  
480/727-1728

**Civic Education (certificate) LACVECERT**

*Description:* 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, civic and social movements.
- 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.

*Program Requirement:* 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 credit hours of political science courses:

POS 210 Political Ideologies, SB (3)  
POS 346 Problems of Democracy, HU (3)  
POS 442 American Political Thought, HU (3)

Choose one from the courses below:

POS 340 History of Political Philosophy I, HU, H (3)  
POS 341 History of Political Philosophy II, HU, H (3)  
POS 443 Topics in Contemporary Political Theory, HU (3)

Choose one from the courses below:

POS 110 Government and Politics, SB (3)  
POS 150 Comparative Government, SB, G (3)  
POS 160 Global Politics, SB, G (3)  
POS 270 American Legal System, SB (3)  
POS 300 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 330 Contemporary Controversies in Domestic Politics, SB (3)  
POS 332 American Political Parties, SB (3)  
POS 333 Interest Groups, SB (3)  
POS 370 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)

Certificate students must have a minimum GPA of 2.00; only courses in which students have a grade of "C" (2.00) or higher count toward the certificate.

*Enrollment Requirements:* Any student admitted to study at ASU may complete a certificate. To apply to the university, please complete the Office of Admissions online application. Please contact the School of Government, Politics, and Global Studies for more information and see <http://www.asu.edu/clas/polisci/undergraduate/civic-certificate.html>.

*Contact Information:*

School of Government, Politics and Global Studies

<http://www.asu.edu/clas/polisci>

COOR 6797

480/965-8563

### **Classical Studies (certificate) LACLGERT**

*Description:* The classical studies program offers students a wide variety of opportunities to study the language, literature and culture of the ancient Greeks and Romans. The School of International Cultures and Letters offer a certificate in

classical studies for those students interested in pursuing a classical education in conjunction with another major or as part of their general studies.

*Program Requirement:* Students admitted to undergraduate degree programs in any field are eligible for the classical studies certificate program. In addition to the course work and examinations required in the student's major, the student is responsible for fulfilling the following minimum requirements:

1. Five semesters of ancient Greek (17 credit hours; GRK 301 and 302 may be repeated for credit) or Latin (19 credit hours) language and literature instruction.
2. Two semesters (six credit hours) in courses related to classical studies (to be approved by coordinators of the certificate).
3. A thesis (three credit hours).
4. A Barrett, the Honors College thesis (six credit hours) or two additional courses at or above the 300 level (six credit hours).

A minimum grade of "C" (2.00) is required in each course leading to the certificate.

*Enrollment Requirements:* Students interested in the classical studies certificate program need to submit an application before being accepted into the program. Please contact the department for more information and see <http://www.asu.edu/clas/silc/academics>.

*Contact Information:*

School of International Letters and Cultures  
<http://silc.asu.edu/undergraduate/certificates>  
silc@asu.edu  
LL 440  
480/965-6281

### **Computer Gaming (certificate) ESSCICERT**

*Description:* The computer gaming certificate is designed to provide a comprehensive game development skill set that the student can apply to their major. The goal is not to teach the student to create recreational video games, but to apply gaming technology to domain-specific problems.

The gaming certificate teaches skills that not only make the student attractive to the rapidly-growing video game industry, but also to a variety of other enterprises, including:

- Business.
- Medicine.
- Geography.
- Education.
- Biotechnology.

*Program Requirement:* Students completing the computer gaming certificate will take a total of 18 credit hours including:

1. Six credit hours of core courses.
2. Choose three courses (nine credit hours) from the specialty tracks.
3. A three-credit-hour capstone project.

The tracks include game programming, game art and gaming in education.

*Enrollment Requirements:* The computer gaming certificate is open to any student admitted to an undergraduate degree program at ASU and in good academic standing. This certificate can also be used by B.I.S. students as part of their degree program. Interested students should make an appointment with the School of Computing and Informatics advising office to determine initial eligibility. After approval from that advisor, the student must get permission from their home department. Once permission is obtained, the School of Computing and Informatics advisor will officially admit the student by attaching the certificate designation to their record. All students admitted to an undergraduate degree program at ASU and in good academic standing are eligible to take the first course in the Certificate, CPI 111 Game Development I. Students who would like to continue with the certificate must add the certificate by completing the undergraduate certificate form (BIS students can contact their advisor).

*Contact Information:*

Computing and Informatics Program  
<http://sci.asu.edu>  
[sci.advising@asu.edu](mailto:sci.advising@asu.edu)  
BYENG 553  
480/965-3190

**Convention Sales and Meeting Planning (certificate) PPTDMCERT**

*Description:* The U.S. meetings, conventions and exhibitions industry generates over \$120 billion a year, supporting nearly two million jobs. Students can explore this exciting growth industry with the convention sales and meeting planning certificate. The demand for professionals is strong and we provide an excellent foundation for enhancing career opportunities nationally and regionally. Phoenix is a major convention and meeting destination.

The \$600 million investment in the Phoenix Convention Center expansion, new hotel and other visitor-related product development, as well as corporate headquarters that continue to relocate to the greater Phoenix area have created the need for qualified professionals to service conventions and meetings. The certificate, which has been endorsed by the Greater Phoenix Convention and Visitors Bureau and the Arizona Sunbelt Chapter of Meeting Professionals International, will enhance a graduate's career opportunities as a tourism professional.

*Program Requirement:* A student must successfully pass all courses within the certificate by attaining at least a grade of “C” (2.00) or “Y” in all courses within the certificate. All five of the required courses must be taken at ASU. Students will earn the certificate once the academic advisors have confirmed the completion of the required courses with satisfactory grades. This will be verified by the School of Community Resources and Development.

#### Required Course Work (15 credit hours)

TDM 205 Introduction to Travel and Tourism, G (3)

TDM 345 Meeting and Convention Planning (3) (prerequisites: must have completed REC 305 or TDM 205 with a grade of “C” (2.00) or higher or be currently enrolled)

TDM 350 Tourism Marketing (3) (prerequisites: must have completed REC 305 or TDM 205 with a grade of “C” (2.00) or higher or be currently enrolled; must have completed 45 hours)

TDM 386 Convention Management and Sales (3)

PRM 486 Special Event Management (3)

*Enrollment Requirements:* Applications are accepted throughout the year. Please contact the department for more information: [://scrd.asu.edu/portal/ia/certificate-programs-1/convention-sales-meeting-planning-certificate/](http://scrd.asu.edu/portal/ia/certificate-programs-1/convention-sales-meeting-planning-certificate/).

To apply, please contact the school's academic advisor for an application form:

Academic Advisor School of Community Resources & Development  
University Center (mail code: 4020)  
411 N. Central Ave., Suite 550  
Phoenix, AZ 85004-0690  
Fax: 602-496-0953

#### *Contact Information:*

School of Community Resources and Development  
<http://scrd.asu.edu>  
[scrd@asu.edu](mailto:scrd@asu.edu)  
UCENT 550  
602/496-0550

#### **Creative City (certificate) PPURBCERC**

*Description:* The creative city certificate prepares students to engage effectively in revitalizing cities and communities by tapping their inherent potential for cultural innovation, placemaking and social/economic entrepreneurship. Exploring best practices globally, students develop asset-based proposals for specific locales including implementation plans. The creative city certificate adds value to other majors as well as work/life experience for students aspiring to assume leadership roles in improving quality of life, specifically by enhancing quality of place.

Cities are centers of human creativity and cultural innovation. They both attract and breed these. Such creativity and innovation are apparent in the vitality of the arts, as well as that of businesses (both large and small), research (basic and applied) and the everyday life unique to any given locale. These are the ingredients that make our places sustainable—economically, socially and environmentally—by endowing a “sense of place” along with a “sense of community.”

This certificate also serves professionals in the community working in the areas of urban governance, land-use law, public art, planning, parks and recreation, community development, philanthropy and others. Flexible class times and locations make the certificate a viable option for those unable to attend classes during the day.

*Program Requirement:* The five-course sequence comprising the certificate will enable students to build upon their own strengths in order to help cities and communities creatively build upon their capacities. The creative city certificate consists of a maximum of 15 credit hours of course work. All courses must be taken at ASU. Required courses and electives are shown below.

**Required core courses** (6 credit hours)

URB 494 Urbanism: Placemaking and Community Building (3)  
URB 494 Public Administration and Community Development (3)

**Sample certificate electives** (9 credit hours)

URB 410 Urban Leadership and Collaborative Skills (3)  
GRA 401 Creating Environments, this course develops individual creativity to apply in collaborative settings to urban and environmental issues (3)  
URB 494 Internship (3)

**Other electives:**

Sustainable Communities (PRM 301, NLM 301, TDM 301)  
Urban Research (URB 301)  
Urban Theory (URB 302)  
Urban and Metropolitan Studies (URB 300)  
Urban Governance (URB 305)  
Senior Professional Seminar (URB 400)  
Public Leadership (PAF 420)  
Introduction to Urban America (URB 220)  
Urban Policy (URB 240)  
Heritage and Cultural Tourism (TDM 448)  
Leisure and the Quality of Life (PRM 120)  
Introduction to Nonprofit Organizations (NLM 220)  
Fund Raising and Resource Development (NLM 300)  
Assessment and Evaluation of Community Services (NLM 402, TDM 402)

Inclusive Community Development (PRD 302, NLM 302, TDM 302)—  
community resources and development majors only  
Voluntary Action and Community Leadership (NLM 160)  
Community Resources and Services (REC 210)  
Living the Arts Downtown (URB 494)  
Contemporary Issues—Civic Enterprise (PAF 494, APA 450)

Note: Some courses may require prerequisites or may be for majors only. Other courses may be substituted with approval from School of Public Affairs.

*Enrollment Requirements:* The creative city certificate is available to all admitted undergraduate students (regular or nondegree) at ASU. Nondegree students are required to apply to ASU (as a nondegree student) and once admitted, contact the School of Public Affairs to be admitted into the certificate program. Students may begin taking courses before they formally apply for the certificate; however, they should apply for admission as soon as possible.

*Contact Information:*

School of Public Affairs

[http://spa.asu.edu/new/undergrad/creative\\_city.htm](http://spa.asu.edu/new/undergrad/creative_city.htm)

spa@asu.edu

UCENT 400

602/496-0450

### **Dietetics (certificate) ECNTRCERD**

*Description:* This certificate program is directed toward postbaccalaureate students who are seeking eligibility for registration as a dietitian. The certificate provides students with documentation that they have completed a limited curriculum and achieved a standardized level of competence in dietetics. The certificate requires 79 hours of specific course work. The program will be administered by the Department of Nutrition curriculum committee. Completion of the certificate will enable students to receive a verification statement from the Commission on Accreditation for Dietetics Education's (CADE) Didactic Program in Dietetics (DPD), which will allow students to apply to dietetic internship programs to obtain the registered dietitian (RD) credential.

*Program Requirement:* Required course work includes:

BCH 361 and 367 Biochemistry with lab (or equivalent)  
BIO 201 Human Anatomy/Physiology I with lab (or equivalent)  
BIO 202 Human Anatomy/Physiology II with lab (or equivalent)  
CHM 113 General Chemistry I with lab (or equivalent)  
CHM 116 General Chemistry II with lab (or equivalent)  
CHM 231 and 235 Organic Chemistry with lab (or equivalent)  
ENG 301 Technical or Professional Writing (or equivalent)  
MIC 205 and 206 Microbiology with lab (or equivalent)

NTR 142 Applied Food Principles  
NTR 241 Human Nutrition  
NTR 340 Applications in Human Nutrition  
NTR 341 Introduction to Planning Therapeutic Diets  
NTR 343 Food Service Purchasing  
NTR 344 Nutrition Services Management  
NTR 350 Nutrition Counseling  
NTR 440 Advanced Human Nutrition I (Micronutrients)  
NTR 441 Advanced Human Nutrition II (Macronutrients)  
NTR 444 Medical Nutrition Therapy  
NTR 445 Management of Food Service Systems  
NTR 446 Human Nutrition Assessment Lecture/Lab  
NTR 448 Community Nutrition  
PGS 101 Introductory Psychology (or equivalent)  
SOC 101 Introductory Sociology (or equivalent)  
Statistics

*Enrollment Requirements:* To enroll in the certificate program, the applicant must be admitted to ASU as a nondegree graduate student or as an undergraduate student in the Department of Nutrition. The applicant must have already completed a bachelor's degree not specific to dietetics. The curriculum committee of the Department of Nutrition will approve applications to the certification program. The DPD director will verify that the program of study has been successfully completed and that all grade requirements have been satisfied. Notification will then be sent to the graduation office to post the certificate on the student's transcript.

*Contact Information:*

College of Nursing & Health Innovation  
<http://www.poly.asu.edu/saas/nutrition/nutrition@asu.edu>  
HSC 1386  
480/727-1728

**East Asian Studies (certificate) LAEASCERT**

*Description:* The certificate in East Asian studies can supplement a bachelor's degree, demonstrating knowledge of an Asian language as well as knowledge of Asian history, art, culture or society. This certificate helps prepares students for admission to graduate programs in Asian area studies or in an academic discipline with an Asian focus, or for professional programs in international law or business. Recent Asian studies graduates have gone on to enter medical school, law school, M.B.A. programs or Ph.D. programs. An earned certificate will appear on student transcripts as an East Asian studies emphasis.

*Program Requirement:* The certificate curriculum includes 24 credit hours of course work:

1. Fifteen credit hours of upper-division area studies course work in at least three disciplines outside of languages and literature courses (such as anthropology, art, geography, history, political science and religious studies).
2. Nine credit hours may be some combination of lower- and/or upper-division courses (six hours may be satisfied with language and literature courses limited to 321 and above).
3. In addition, certificate students must demonstrate proficiency in an Asian language at the intermediate level. The language requirement can be satisfied by one of the following:
  - Completing the 201 and 202 sequence
  - One year of study abroad at the intermediate level
  - Satisfactory placement on a proficiency exam.

Asian languages include Chinese, Hindu/Urdu, Indonesian, Japanese, Korean, Thai and Vietnamese. Students pursuing an East Asian studies certificate must fulfill the language requirement in either Chinese, Japanese or Korean, and the 15 hours of upper-division course work must be courses with significant focus on East Asia chosen in consultation with the Center for Asian Research advisor.

A minimum grade of "C" (2.00) is required for each course that is used to fulfill the certificate requirements.

*Enrollment Requirements:* There are no specific admission requirements other than a student's desire to learn about East Asia. Please contact the department for more information and see [http://www.asu.edu/clas/asian/certificate\\_undergrad.html](http://www.asu.edu/clas/asian/certificate_undergrad.html).

*Contact Information:*

Dean, College of Liberal Arts and Sciences  
[http://www.asu.edu/clas/asian/  
car@asu.edu](http://www.asu.edu/clas/asian/car@asu.edu)  
COOR 6th  
480/965-7184

### **Entertainment and Technology (Certificate) LAFMSUERE**

*Description:* The entertainment and technology certificate is for students who have completed a course of study that includes 18 credit hours of entertainment and technology history, theory and convergence studies. It certifies that the student has had the training to analyze industry changes over time, to identify current industry trends and to develop likely entertainment and technology models and scenarios for the future.

*Program Requirement:* ASU students admitted to a degree program in any field of study are eligible for the entertainment and technology certificate. In addition to the course work and examinations required in the major field of interest, students are responsible for fulfilling the requirement of 18 credit hours to earn the certificate.

The upper-division courses are a three-course sequence and are taken upon completion of three lower-division film and media studies courses. A minimum grade of "C" (2.00) or better is required in each course. Required certificate core courses (18 credit hours) are:

- FMS 100 Introduction to Film (3)
- FMS 110 New Media, New Worlds (3)
- FMS 200 Film History (3)
- FMS 481 Entertainment Technologies (3)
- FMS 482 Entertainment Industries (3)
- FMS 483 Techno-Entertainment Convergences (3)

*Enrollment Requirements:* Any student admitted to study at ASU may complete a certificate. To apply to the university, please complete the Office of Admissions online application. Please contact the department for more information and see <http://film.asu.edu/entertech>.

*Contact Information:*

Dean, College of Liberal Arts and Sciences  
<http://film.asu.edu/certificates>  
LL 641  
fmsinfo@asu.edu  
480/965-6747

**Environmental Humanities (Certificate) LAENHCERT**

*Description:* The environmental humanities certificate offers students who are interested in humanities-based approaches to the current global environmental crisis an option to focus in this vital area of study. Students take three ENG/ENH courses and four electives from selected programs that are in whole or large part focused on the human relationship to the environment and the relationship between nature and culture. To gain practical experience, certificate students also complete a required English internship in environmental activism, policy development, education or other pertinent areas.

*Program Requirement:* The environmental humanities certificate consists of 24 hours, of which at least 12 hours must be upper-division.

Core Required Courses (9 hours)

Complete three English courses from the list below. Note: other ENG courses may be approved by an English advisor depending on special- or variable-topics courses available in given semesters.

- ENG 345 Selected Authors or Issues (variable-topics course) (3)
- ENG 359 American Indian Literatures (3)

ENG 363/TCL 363 Transborder Mexican and Chicano/a Literature of Southwest North America (3)  
ENG 394/370 Science, Ethics, and the Public (3)  
ENG 469 Science and Literature (variable-topics course) (3)  
ENH 372 Environmental Creative Nonfiction (3)  
ENH 374 Environmental Issues in Literature and Film (3)  
ENH 378 The American Southwest in Literature and Film (3)  
ENH 475 Environmental Literary Criticism(3)

Internship (3 hours)

ENG 484 Undergraduate Internship: Environmental Humanities Certificate (3)

If an environmental internship is not feasible, a student may petition to substitute (a.) an ENG 499 Independent Study on an environmental studies applied project or literature/writing topic or (b.) an ENG 400-level course in environmental literature/writing.

Electives (12 hours)

Complete four additional courses (see advisor for approved list). Note: some courses are limited to students majoring in the discipline, have prerequisites or cannot be taken in combination with another course on the list. Additional courses may be approved by English advisor depending on special- or variable-topics courses available in given semesters.

*Enrollment Requirements:*

*Contact Information:*

Department of English  
<http://english.clas.asu.edu/>  
englishadvising@asu.edu  
LL 542  
480/965-3168

### **Ethics (certificate) LAETHCERT**

*Description:* The ethics certificate is designed to give students a richer understanding of systematic philosophical thinking about ethics. Students with majors in business, nursing, journalism and public administration, among others, may well find that training in ethics is beneficial to their career goals. The certificate program permits some flexibility regarding course selection, thereby facilitating particular student interests.

*Program Requirement:* The certificate in ethics consists of 18 credit hours approved by the undergraduate advisor in the School of Historical and Critical Inquiry. The student must take PHI 305 or PHI 335. At least 15 credit hours must be chosen from

PHI 105, 304, 305, 306, 307, 309, 310, 320, 335 and (when its topic is within ethics) PHI 420. One course outside this list, and perhaps outside the school, may be used with written approval from the director of undergraduate studies. All courses must be passed with a minimum grade of "C" (2.00).

*Enrollment Requirements:* Any student admitted to study at ASU may complete a certificate. To apply to the university, please complete the Office of Admissions online application. Please contact the School of Historical and Critical Inquiry for more information.

*Contact Information:*

School of Historical and Critical Inquiry

[http://www.asu.edu/clas/philosophy/phidev/devug\\_certificate.html](http://www.asu.edu/clas/philosophy/phidev/devug_certificate.html)

philosophy@asu.edu

COOR 3309

480/965-3394

### **Ethnic Studies (certificate) ASETHCERT**

*Description:* The certificate program in ethnic studies explores the study of race and ethnicity in local and transnational contexts. Students take courses that introduce a general conceptual framework regarding race and ethnicity and how they intersect in the construction of social formations.

Specifically, courses in the ethnic studies certificate are designed to:

1. Address theoretical, analytical and practical issues relevant to understanding race, culture, and ethnicity in American society from a comparative and interdisciplinary perspective.
2. Enhance the student's critical thinking and writing skills through the study of ethnicity in the U.S.
3. Develop more effective skills for working in diverse communities through integration of service-learning experiences in course content.
4. Create collaborations among faculty, students and community members to address concrete issues facing racial and ethnic groups in the United States.

This certificate is designed for students who plan to work and live in ethnically diverse communities and seek to acquire the skills for understanding the complexities of race, class and gender at a local or national level. It is expected that students in the certificate program will be able to think both analytically and creatively about ethnicity in the United States. The certificate is strongly recommended for students who plan to enter a wide variety of jobs in business, health professions, the criminal justice system, social services, education, public relations, community development, public policy or government. It is also valuable for students preparing for further graduate study.

*Program Requirement:* A certificate in ethnic studies is awarded for successful completion of 21 credit hours, including ETH 300 and 18 credit hours of elective

courses from the approved course list. The certificate program is recommended for graduate students, nondegree students and students majoring in professional programs.

Students must meet with the program academic advisor to review the requirements and sign the certificate check sheet. The student should also consult with an academic advisor in the college or department of his or her major to make sure the college or department of the major recognizes the certificate. All course work in the program must be completed with a grade of "C" (2.00) or higher.

*Enrollment Requirements:* The certificate in ethic studies is open to all undergraduate majors. However, students should consult with the advisors in the department of their major to determine if the minor is consistent with their educational goals. Students are encouraged to take courses outside their major and college. For more information, visit [http://newcollege.asu.edu/programs/erfns/minor\\_cert/certificate.shtml/](http://newcollege.asu.edu/programs/erfns/minor_cert/certificate.shtml/).

*Contact Information:*

Division of Humanities, Arts, and Cultural Studies  
[http://newcollege.asu.edu/programs/erfns/minor\\_cert/certificate.shtml/](http://newcollege.asu.edu/programs/erfns/minor_cert/certificate.shtml/)  
harcs.dept@asu.edu  
FAB N290  
602/543-4444

### **Film and Video Studies (Certificate) ASVIDCERT**

*Description:* The certificate in film and video studies explores theory and practice in the general field of the moving image. This interdisciplinary program provides students an opportunity to develop interests, skills and knowledge of the forms, channels, technologies and histories of the media arts. Students may pursue focused interests in film studies or adopt a more generalized approach to visual media through television, film and video.

The program is useful to students who may pursue careers in broadcasting, writing and public relations, and degrees in production, film studies, media studies, performance studies and communication studies. Courses in the certificate in film and video studies are designed to:

- Develop astute and discriminating critics and analysts of film and media arts.
- Strengthen critical thinking through an awareness of the philosophical, aesthetic, political and technological debates in film, media and video studies.
- Develop knowledge of the history of film, television and the video arts as dynamic forces of social, cultural and political expression.
- Develop practical skills that enable students to be competitive in film, video, television and media-related production industries.

*Program Requirement:* A certificate in film and video studies is awarded for the successful completion of the 21 credit hours required for the minor.

*Enrollment Requirements:* The certificate in film and video studies is open to all undergraduate majors. However, students should consult with the advisors in the department of their major to determine if the minor is consistent with their educational goals. Students are encouraged to take courses outside their major and college.

*Contact Information:*

Division of Humanities, Arts, and Cultural Studies

<http://newcollege.asu.edu/>

FAB N290

harcs.dept@asu.edu

602/543-4444

**Geographic Information Science (certificate) LAGISCERT**

*Description:* The geographical information science (GIS) certificate program is a structured interdisciplinary program. It is built on GIS course work currently being taught at ASU. Students who earn the certificate exit the program with standardized skill sets based on learning outcomes associated with each required course.

*Program Requirement:* The certificate is awarded to students completing the following 19 credit hours with a grade of "C" (2.00) or higher.

Required courses

CSE 100 Principles of Programming with C++, CS (3) or CSE 110 Principles of Programming with Java, CS (3)

GCU 495 Quantitative Methods in Geography, CS (3)

GPH 370 Geographic Information Technologies, CS (3)

GPH 373 Geographic Information Science I, CS (4)

GPH 473 Geographic Information Science II, CS (3)

Electives (3)

ABS 485 GIS in Natural Resources (3)

ABS 586 Remote Sensing in Environmental Resources (4)

GCU 361 Urban Geography, SB (3)

GCU 441 Economic Geography, SB (3)

GCU 442 Geographical Analysis of Transportation, SB (3)

GPH 371 Introduction to Cartography and Georepresentation, CS (3)

GPH 372 Air Photo Interpretation (3)

GPH 471 Geographics: Interactive and Animated Cartography and Geovisualization, CS (3)

GPH 481 Environmental Geography (3)

GPH 483 Geographic Information Analysis (3)

GPH 484 Internship: GIS-Based (3)  
PLB 434 Landscape Ecological Analysis and Modeling (3)

*Enrollment Requirements:* Any student admitted to study at ASU may complete a certificate. To apply to the university, please complete the Office of Admissions online application. Please contact the school for more information.

*Contact Information:*

School of Geographical Sciences and Urban Planning  
<http://geography.asu.edu/undergrad-gis-certificate>  
geographyadvising@asu.edu  
COOR 5650  
480/965-7533

**Hazardous Materials and Waste Management (certificate) TSETMCERT**

*Description:* The certificate program in hazardous materials and waste management is designed to provide current and prospective employees of industry and government with a comprehensive and practical curriculum of study in hazardous materials management. The certificate program features instruction by ASU faculty, attorneys and professionals who work in the specific area in which they teach. Participation in the certificate program is available in three options: a certificate program for nondegree students, a B.S. in environmental technology management with a certificate in hazardous materials and waste management, and a M.S.Tech. with a certificate in hazardous materials and waste management.

*Program Requirement:* Students must complete seven selected courses (five required and two electives) and earn a grade of "C" (2.00) or higher to receive the certificate. Except for the introductory course, ETM 501 Principles of Hazardous Materials and Waste Management, the remainder of the courses may be taken in any sequence.

*Enrollment Requirements:* Please contact the department for more information:  
<http://etmonline.asu.edu/>.

*Contact Information:*

Department of Technology Management  
<http://etmonline.asu.edu/>  
TECH 102  
480/727-1781

**History and Culture (Certificate) ECHTYUERT**

*Description:* The history and culture certificate encourages students to develop their historical awareness and their ability to use historical knowledge to make informed decisions. The program stresses cultural and information literacy. It encourages the study of historical events in their cultural context and stresses the role of media and technology in historical study. The philosophy of the program in history and culture

that students should be offered an experience that integrates formal course work, independent and varied research, internships and service opportunities. The program goal is preparing independent and effective scholars and professionals who can transition seamlessly into careers in teaching, public policy, archival work and related fields and who are well prepared for graduate or further professional study.

*Program Requirement:* The certificate consists of 15-18 credit hours: nine credit hours of focus-area courses in their chosen track and six to nine credit hours of electives.

*Enrollment Requirements:* Contact advisors in the School of Letters and Sciences for admission to the certificate program. See <http://sls.asu.edu/humpoly/hc/advising.html>.

*Contact Information:*  
School of Letters and Sciences  
<http://sls.asu.edu/humpoly/hc/advising.html>  
SANCA 233  
hua@asu.edu  
480/727-1526

### **History and Philosophy of Science (certificate) LAHPSCERT**

*Description:* The School of Life Sciences offers an undergraduate certificate in the history and philosophy of science. This program is designed to give students an understanding of both traditional philosophic issues surrounding science and the historical development of concrete scientific theories and ideas.

The philosophic questions about how we understand nature through science and how scientific claims gain authority are enriched when they are considered in an historical context. Such philosophic and historical study will also often include the examination of contemporary sciences and their place within the larger society, including the study of bioethics, policy and law.

This certificate is a valuable addition for students in the sciences or the humanities. It crosses disciplines to help students engage in unfamiliar and familiar paths of inquiry in new and interesting ways.

*Program Requirement:*

1. The certificate requires 18 credit hours bearing a PHI or HPS prefix, of which 12 credit hours must be upper-division.
2. Within the 18 credit hours, at least nine must bear the HPS prefix.
3. PHI 314 Philosophy of Science is required.

4. All courses counting toward the certificate must be approved by an undergraduate advisor in the School of Life Sciences and passed with a grade of "C" (2.00) or higher.

*Enrollment Requirements:* Any student admitted to study at ASU may complete a certificate. To apply to the university, please complete the Office of Admissions online application. Please contact the School of Life Sciences for more information and see <http://sols.asu.edu/cbs/programs.php>.

*Contact Information:*  
School of Life Sciences  
<http://sols.asu.edu/>  
[sols.advising@asu.edu](mailto:sols.advising@asu.edu)  
LSC 206  
480/727-6277

### **Honors Business Modeling and Analysis (certificate) BAECNUERT**

*Description:* This certificate is designed to enhance your knowledge in a major while also adding to your understanding of business strategy in a global market. The required curriculum strengthens skills in critical thinking and problem solving, business judgment and conceptualization of strategic solutions.

*Program Requirement:* The program consists of at least 24 credit hours of course work distributed between economics and related fields as shown below. Only courses in which a student receives a grade of "C" (2.00) or higher may be used to meet the certificate requirements. Students must meet all pre-requisites and course requirements as listed in the catalog. At least 15 hours must be ASU credit.

#### **Statistics (3 credit hours)**

ECN 231 Honors Business Statistics  
ECN 221 Business Statistics with a grade of "A-" (3.67) or higher  
STP 226 Elements of Statistics with a grade of "A-" (3.67) or higher

#### **Economic Theory (3 credit hours)**

ECN 214 Honors Microeconomics  
ECN 212 Microeconomics Principles with a grade of "A-" (3.67) or higher  
ECN 312 Intermediate Microeconomics

#### **Accounting (3 credit hours)**

ACC 261 (ACC 303) Honors Fundamentals of Financial Accounting  
ACC 231 (ACC 230) Uses of Accounting Information I with a grade of "A-" (3.67) or higher  
ACC 315 Financial Accounting and Reporting  
ACC 340 External Reporting I

**Honors Business Core** (6 credit hours)

Completion of at least 6 credit hours of approved 300-level honors business courses for which all prerequisites have been met. Approved courses include:

ECN 303 Honors Managerial Economics  
FIN 303 Honors Finance  
MKT 303 Honors Marketing Theory and Practice  
MGT 303 Honors Organizational Strategies, Leadership and Behavior  
SCM 303 Honors Global Supply Operations

**Business Modeling and Analysis** (3 credit hours)

SCM 415 (SCM 494) Business Decision Models

**Honors Directed Study and Creative Project** (6 credit hours)

WPC 492 Honors Directed Study for Business Modeling  
WPC 493 Honors Creative Project for Business Modeling

*Enrollment Requirements:* The certificate in honors business modeling and analysis is limited to honors students in the W. P. Carey School of Business and honors students majoring in economics in the College of Liberal Arts and Sciences. Students must submit an application for admission. Please contact the department for more information and see <http://wpcarey.asu.edu/undergraduate/business-degrees/honors-modeling-analysis.cfm>.

*Contact Information:*

Department of Economics  
<http://wpcarey.asu.edu>  
wpcareyug@asu.edu  
BA 109  
480/965-4227

**Human Rights (Certificate) LAHRTSCERT**

*Description:* The certificate in human rights offers a model for educating and training ASU undergraduate students through socially embedded, transdisciplinary dialogue, research and practice. Course work in the social sciences, law and the humanities will prepare students to critically examine societal problems and to design culturally congruent and contextually specific solutions to human rights dilemmas in such areas as health, education, violence against women, child welfare, the environment, water and energy resources, and economic development. Human rights is a powerful framework that extends beyond political and civil rights to encompass social, cultural and economic rights including, for example, women's rights, indigenous rights, labor rights and rights discourse has been invoked to combat race-, gender- and class-based forms of discrimination.

The 18-credit-hour curriculum balances foundations and principles of human rights (theories, laws, institutions and norms) and their application in relation to specific domestic and international issues. The certificate program also will strengthen students' respect for fundamental freedoms and rights and promote cultural understanding, tolerance and civic engagement. It provides students with historical, legal and philosophical perspectives from which to think broadly and critically about human rights issues, and introduces students to social science and policy research on rights, conflict and governance; to human rights conventions, laws and treaties; and to the institutions that seek to uphold these agreements (e.g., international tribunals, nongovernment organizations, etc.). The goal is to provide students with the guidance, background and skills needed to work within those professions most closely aligned with human rights, including some aspects of law, nongovernment organizations and other nonprofits and policy development.

Geographically, ASU is an ideal location for an undergraduate human rights certificate. Situated in the Sonoran Desert, Arizona will increasingly face human rights issues related to environmental degradation (e.g., access to water and energy resources). Close proximity to Mexico also guarantees that human rights issues related to immigration will continue to dominate political discourse and policy decisions in Arizona for the foreseeable future. Similarly, with 21 American Indian tribes and nations in Arizona alone, indigenous rights will remain a central concern for residents of the Southwest. Undergraduate students engaged in a human rights dialogue will be well situated to develop appropriate models for improving conditions within local communities and to critically assess such frameworks locally and globally.

The certificate is not a substitute for degree requirements in any majors, including justice studies, but rather the course work is intended to supplement the student's chosen major by adding a human rights dimension and focus.

*Program Requirement:* Students must complete 18 hours of qualifying course work, at least 12 hours of which must be from ASU. A minimum grade of "C" is required for a course to count towards the certificate. The same course may be used to satisfy multiple graduation requirements.

#### Required Certificate Core Courses:

1. Global Politics of Human Rights (3)

Students must select one of the following courses:

POL 494 International Human Rights

JUS 352 The Global Politics of Human Rights

2. Human Rights Institutions and Organizations (3)

Students must select one from the following options:

POS 465 International Organization and Law

SGS 394 International Institutions and Global Governance

3. Interdisciplinary Component (9)

Students must select three electives on current issues in human rights. Courses must be taken from at least two of the substantive areas listed below, and from two or more academic units. Any course listed below may count towards this requirement, as well as other courses as approved by the certificate program director. (Note: Some course numbers are changing; new numbers are listed within parentheses.)

**States and Conflict**

HST 370 Eastern Europe in Transition  
HST 436 The Soviet Experiment  
JUS 394 (JUS 374) Holocaust, Genocide and Human Rights  
JUS 469 Political Deviance and the Law  
JUS 479 Law and Disputing  
JUS 467 Terrorism, War and Justice  
JUS 494 Justice in Times of Transition  
JUS 494 (JUS 452) Justice Issues in Israel/Palestine  
POS 369 War, Politics and Society  
POS 465 International Organizations and Law  
POS 368 Ethics and Human Rights in Global Politics  
REL 388 Religion, Ethics, and International Affairs  
REL 486 Holocaust in Film

**Social Stratification and Human Rights**

AFH 305 The Global History of the Trans-Atlantic Slave Trade  
AFH 327 Human Rights in Africa  
AFS 494/WGS 598 Women's International Human Rights  
APA 394 Inequality and Diversity in Education  
APA 394 Asian Pacific American Immigration and Social Justice  
JUS 321 Wealth Distribution and Poverty  
JUS 325 Globalization and Socio-Economic Justice  
JUS 405 Economic Justice  
JUS 415 Gender and International Development  
JUS 477 Youth and Justice  
PHI 309 Social and Political Philosophy  
WST 394 Women and International Health

**Marginalization and Human Rights**

AFS 301 Race and Racism in the African Diaspora  
AFS 304 Islands of Globalization  
AFS 394 (AFS 320) Race, Ethnicity and Politics in the African Diaspora  
APA 330 Asian Pacific American Genders and Sexualities  
APA 360 The Asian Pacific American Experience  
ASB/SBS/SOC/POL 339 Introduction to Social Movements  
JUS 430 Social Protest, Conflict and Change  
JUS 469 Political Deviance and the Law

JUS/REL 494 (JUS/REL 483) Religion, Violence and Conflict  
Resolution  
POS 480 Global Justice  
SGS 343 Religion, Nationalism and Ethnic Conflict  
SOC 445 Globalization, Development and Resistance  
WGS 410 Poverty, Social Justice and Global Health  
WGS 498 Gender, Religion and Global Violence

4. Experiential Learning Component (3)

A central element of this certificate program will be the linkage of learning and doing by connecting theoretical and substantive learning about human rights with practical knowledge about the workings of organizations and institutions seeking to address human rights violations. To better connect classroom learning with practical experience, students will be required to participate in either a for-credit internship with a human rights organization in the U.S. or abroad or a Research Experience with Undergraduates (REU) under the supervision of a human rights faculty member (honors thesis may substitute). A written component to the internship or REU is required.

Students pursuing the certificate will also be invited (and expected) to attend events such as conferences, speaker series, etc. offered by affiliated departments, schools and centers.

*Enrollment Requirements:* Students who have attained junior standing (56 credit hours) in any undergraduate degree program in any field at ASU are eligible for admission to the certificate in human rights. There are no formal admissions procedures to begin certificate course work, but students should contact the certificate in human rights program director or an advisor as soon as they decide to begin pursuing the certificate. They should initiate this correspondence with a message containing their name, e-mail address, major, year of study and anticipated graduation date, as well as a general statement of interest.

In addition to the undergraduate advisors in the School of Justice and Social Inquiry, students will receive advising assistance from the certificate director or a member of the certificate program committee in developing a plan that will ensure successful completion of certificate requirements. To facilitate this process, each participating unit has a representative on the program committee. Students are responsible for consulting with an advisor in the School of Justice and Social Inquiry prior to graduation to request that the certificate be recorded on their transcripts.

*Contact Information:*

School of Social Transformation  
<http://sjsi.clas.asu.edu/>  
justiceinfo@asu.edu  
WILSN 125  
480/965-7682

### **Informatics (certificate) ESCPICERT**

*Description:* The certificate in informatics will train students to use computer technology to gather, synthesize, store, visualize and interpret information. These skills are critical to a broad range of disciplines. This certificate is available to students in non-computing majors and will provide them with an understanding of the capabilities and technologies of informatics as it applies to domain specific problems in their field of study. Graduates should be in high demand within the software industry, but also in government, education, science, medicine, and other fields that make use of computer technology. The applied and user-oriented focus of the degree will make these graduates attractive to such employers.

*Program Requirement:* This program requires 21 total hours of course work. Students will take 15 hours of required courses and will choose six hours of elective course work.

*Enrollment Requirements:* The undergraduate certificate in informatics is available to students in noncomputing majors who are in good standing at ASU and may be used by B.I.S. students as part of their degree program.

#### *Contact Information:*

Computing and Informatics Program

<http://sci.asu.edu>

[sci.advising@asu.edu](mailto:sci.advising@asu.edu)

BYENG 208

480/965-3199

### **International Business (certificate) BAIBSCERT**

*Description:* Students can expand their horizons and opportunities by learning about the global economy. The certificate is designed to:

- Provide an understanding of international business environments, principles and operations.
- Provide an awareness of global social processes.
- Develop sensitivity to foreign cultures.
- Develop competence in a foreign language.

Students seeking the certificate are strongly encouraged to obtain some international experience through study in a foreign country. The W. P. Carey School has partnerships with universities in Europe, Asia and Latin America so you can experience new cultures, visit new places and build intercultural and language skills. International internships also are offered in conjunction with the ASU Study Abroad Office.

*Program Requirement:* This certificate program requires a minimum of 18 credit hours.

At least nine credit hours of approved courses in international business are required. The upper-division courses specified for the certificate will be restricted to students with 56 earned credit hours, a minimum 2.50 ASU cumulative GPA and course prerequisite requirements met. Students must take either MGT 302 Principles of International Business or ECN 306 Survey of International Economics. Other international business courses from which the remaining hours are selected include:

- ECN 306 Survey of International Economics, SB, G\* (3)
- ECN 331 Alternative Economics Systems, SB, G\* (3)
- ECN 360 Economic Development, SB, G\* (3)
- ECN 365 Economics of Russia and Eastern Europe, SB, G\* (3)
- ECN 436 International Trade Theory, SB, G\* (3)
- ECN 438 International Monetary Economics, SB, G\* (3)
- FIN 456 International Financial Management, G\* (3)
- MGT 302 Principles of International Business, G\* (3)
- MGT 400 Cultural Factors in International Business\*, C, G (3)
- MGT 459 International Management\*, G (3)
- MKT 360 Seminar in International Business (3)
- MKT 425 International Marketing (3)
- SCM 463 Global Supply Chain Management (3)

\*W. P. Carey School of Business students may not use this course to fulfill the 60 credit hours in school general education degree requirements.

At least 9 credit hours of nonbusiness global awareness hours are required. Any university-designated nonbusiness global awareness ("G") courses will meet this requirement.

To encourage participation in an international study experience, the nonbusiness global awareness hours may be satisfied by participating on an ASU or W. P. Carey School of Business education abroad program for one semester, which waives all 9 credit hours of nonbusiness global requirements. Participation on an ASU or W. P. Carey School of Business study tour or program of at least six weeks in duration waives 6 of the 9 credit hours of nonbusiness global requirements.

*Enrollment Requirements:* Students need to complete an application, which is available online or in BA 109. Please contact the department for more information and see <http://wpcarey.asu.edu/undergraduate/current-students/academics/international-certificate.cfm>

*Contact Information:*

Dean, W.P. Carey School of Business  
<http://wpcarey.asu.edu/>  
BA 109

wpcareyug@asu.edu  
480/965-4227

### International Studies (certificate) LAINSCERT

*Description:* The international studies certificate is designed to prepare students for careers in government agencies, international governmental and nongovernmental organizations, multinational firms and banks and for graduate studies in international relations or political science. The certificate is not a substitute for degree requirements in any subject, including political science; rather, the required courses add an international and comparative dimension to the student's chosen major.

*Program Requirement:* 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 credit hours of political science courses.

Choose one from the courses below:

POS 150 Comparative Government, SB, G (3)  
POS 160 Global Politics, SB, G (3)

Choose one from the courses below:

POS 361 American Foreign Policy SB, G (3)  
POS 364 National Security, Intelligence and Terrorism SB (3)

Choose two from the courses below:

POS 300 Contemporary Controversies in Global Politics, SB, G (3)  
POS 368 Ethics and Human Rights  
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:

POS 350 Comparative Politics, SB, G (3)  
POS 355 Russia and Successor States, SB, G (3)  
POS 356 European Union, 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 Koreas, 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 468 Comparative Asian Foreign Policies, SB, G (3)

Certificate students must have a minimum GPA of "C" (2.00); only courses in which students have a grade of "C" (2.00) or higher count toward the certificate.

*Enrollment Requirements:* Any student admitted to study at ASU may complete a certificate. To apply to the university, please complete the Office of Admissions online application. Please contact the School of Government, Politics and Global Studies for more information:

<http://www.asu.edu/clas/polisci/undergraduate/intl-certificate.html>.

*Contact Information:*

School of Government, Politics and Global Studies

<http://www.asu.edu/clas/polisci>

COOR 6797

480/965-8563

### **Islamic Studies (certificate) LAISLCERT**

*Description:* Students admitted to undergraduate degree programs in any field are eligible for the Islamic studies certificate program. Students who complete all the requirements of their major, their college and the certificate program receive the certificate plus transcript recognition of their particular emphasis. The certificate program is designed to prepare students for graduate programs in religious studies, Islamic studies and area studies or for any academic discipline (such as professional programs in international law and business) that focuses on global Muslim society.

*Program Requirement:* Students must complete a minimum total of 26 credit hours, chosen in consultation with the Islamic studies program coordinator. A minimum grade of "C" (2.00) is required in each course. To earn the certificate, students must complete these requirements:

5. Eight credit hours of Arabic, Indonesian or another language approved by the program coordinator; students who are native speakers of these languages or who otherwise have equivalent knowledge substitute two additional courses approved by the program coordinator.
6. Nine credit hours from REL 260 Introduction to Islam, REL 365 Islamic Civilization and REL 366 Islam in the Modern World.
7. Three credit hours taken from REL 394 or REL 460 Studies in Islamic Religion.

8. Six credit hours drawn from an approved list of courses in Arabic, anthropology, French, geography, history, religious studies, Spanish or from other courses approved by the program coordinator.

*Enrollment Requirements:* Any student admitted to study at ASU may complete a certificate. To apply to the university, please complete the Office of Admissions online application. Please contact the School of Historical and Critical Inquiry for more information.

*Contact Information:*

School of Historical and Critical Inquiry  
[http://www.asu.edu/clas/religious\\_studies/  
religious\\_studies.advising@asu.edu](http://www.asu.edu/clas/religious_studies/religious_studies.advising@asu.edu)  
ECA 377  
480/965-0642

### **Jewish Studies (certificate) LAJUDCERT**

*Description:* The Jewish studies program is designed with the following goals in mind: to examine the history and culture of the Jews, to provide a model for interdisciplinary teaching and research, to generate and facilitate research on Judaica, to provide the community with programs, courses, and research furthering the understanding of Judaica, and to stand as an example of the university's commitment to a program of meaningful ethnic studies on a firm academic base.

*Program Requirement:* To complete the certificate in Jewish studies, a student must successfully complete seven approved courses in Jewish studies with a grade no lower than a "C" (2.00) in any course. Students should declare themselves as Jewish studies candidates as early as possible in their program of study, and accomplish the following prior to graduation:

1. Formal declaration of intent through the submission of the Certificate in Jewish Studies Application.
2. Completion of at least seven courses in Jewish Studies, including two semesters of Hebrew language or equivalent approved courses.
3. One course in three of the following five areas:
  - History.
  - Humanities.
  - Literature.
  - Religious studies.
  - Social studies.
4. Two courses of the student's choice in any Jewish studies related subject.

Petition for receipt of the certificate by notifying the Jewish studies office upon completion of courses.

*Enrollment Requirements:* Please contact the department for more information at <http://jewishstudies.clas.asu.edu/certificate>.

*Contact Information:*

Dean, College of Liberal Arts and Sciences  
<http://jewishstudies.clas.asu.edu/>  
Jewish-Studies@asu.edu  
COOR 4465  
480/727-6906

**Latin American Studies (certificate) LALASCERT**

*Description:* The Latin American studies certificate program is designed to give students an understanding of culture, economies, political structures and the history of Latin American nations. The departments of economics, geographical sciences, history and political science, the School of Human Evolution and Social Change, the School of International Letters and Cultures (Spanish and Portuguese) and transborder Chicana/o and Latina/o studies offer courses that combine in the interdisciplinary certificate.

*Program Requirement:*

- Students must complete 30 credit hours of upper-division courses from the above departments/colleges with a concentration in Latin America, 15 credit hours in the major subject and 15 credit hours in other disciplines.
- The certificate requires Spanish or Portuguese proficiency through the 313 level of conversation and composition.
- Only language courses above 313 in literature and civilization count toward a major or interdisciplinary areas of preparation.
- Spanish and Portuguese courses above 313 in grammar and phonology do not count toward the major requirements. Students should meet with the certificate advisor regarding course questions.

*Enrollment Requirements:* Any student admitted to study at ASU may complete a certificate. To apply to the university, please complete the Office of Admissions online application. For more information, contact the School of International Letters and Cultures. Please see the school's Web page for more information.

*Contact Information:*

Dean, College of Liberal Arts and Sciences  
<http://silc.asu.edu/undergraduate/certificates>  
silc@asu.edu  
LL 440  
480/965-6281

## Leadership and Ethics (certificate) PPLDECERT

*Description:* The certificate in leadership and ethics is designed for undergraduate students who are interested in developing leadership skills or wish to enhance their degree in an existing major at ASU, working adults who may wish to further their education yet may not be looking for a degree program, or B.I.S. students who seek to combine certificates with their degree.

The certificate program provides a catalyst for students to become ethical leaders of organizational and community change. This certificate is designed to:

1. Prepare individuals for positions of leadership and responsibility in the university, student organizations, in their communities and throughout their careers in business, government and society.
2. Explore the relationship between leadership and the capacity for individuals to assume responsibility for their actions and to act with a sense of ethics and integrity.
3. Focus on understanding the broad interdisciplinary field of leadership and its application to various elements of society and community.

*Program Requirement:* The certificate in leadership and ethics consists of 15 credit hours of course work. Students take 12 hours of core classes and three hours of elective courses. The three hours of elective course work may be selected from an approved list of elective classes or upon the recommendation of the department.

All courses applied to the certificate must be completed with a grade of “C” (2.00) or better. The certificate in leadership and ethics requires four core courses, including a leadership capstone experience, and one elective, discipline-based course in leadership or ethics.

### Core classes

- PAF 410 Building Leadership Skills (3)
- PAF 411 Leadership and Change (3)
- PHI 394 Ethics and Justice (3)
- PAF 494 Leadership Capstone (3)

All core courses and the leadership capstone must be taken at Arizona State University. Any course substitutions for the certificate are at the discretion of the School of Public Affairs.

*Enrollment Requirements:* There are different application requirements, depending on your enrollment status with ASU. Students are also encouraged to schedule an appointment with the undergraduate academic adviser in the School of Public Affairs.

### Undergraduate Students Currently Enrolled at ASU

Current students interested in earning the certificate must complete a request to

add an undergraduate certificate and return it to the undergraduate academic advisor in the School of Public Affairs at the University Center on the Downtown Phoenix campus. Students may begin taking courses before they formally register for the certificate; however, they are encouraged to complete the paperwork as soon as possible.

Download the request to add an undergraduate certificate at [http://spa.asu.edu/new/undergrad/Certificate%20Request%20Form\\_PPLDECERT.pdf](http://spa.asu.edu/new/undergrad/Certificate%20Request%20Form_PPLDECERT.pdf).

### **Individuals Not Currently Enrolled at ASU**

Individuals who are not currently enrolled as students at Arizona State University must complete an application to enroll as a nondegree seeking student before they may begin taking courses. For information on admissions and to complete an application, visit the university's nondegree student admissions page at <http://students.asu.edu/non-degree-student-admission>.

Once students have been admitted, they are eligible to enroll in courses to complete the certificate program.

#### *Contact Information:*

School of Public Affairs

<http://spa.asu.edu/new/undergrad/leadership&ethics.htm>

spa@asu.edu

UCENT 400

602/496-0450

### **Lesbian, Gay, Bisexual, and Transgender Studies (certificate) PPLGBTCERT**

*Description:* The undergraduate certificate in lesbian, gay, bisexual and transgender studies is offered by the Committee on Lesbian, Gay, Bisexual, and Transgender Studies, administered through the College of Public Programs. Advising is provided through University College. Lesbians, gay men, bisexuals and transgendered (LGBT) people play important roles as colleagues, clients, parents, children, siblings, neighbors, employees, employers, religious leaders and friends. Given the increasing visibility and changing political climate for LGBT people in the United States, all students—not only those who identify themselves as gay, lesbian, bisexual or transgender—are served well by learning about the histories, communities and contemporary social issues regarding people from LGBT backgrounds.

The educational experience is enhanced when students are introduced to complex intersections between and among sexual, racial, ethnic, religious, geographic and national identities. The philosophy of this certificate program is to promote intellectual and pedagogical diversity as one of the university's greatest assets, in part by instilling in students sensitivity to cultures different from their own, but also

through careful analysis of the self in historical, artistic and sociocultural contexts. The goals of the certificate program are to give students:

1. Knowledge about specific lesbian, gay, bisexual and transgendered communities.
2. Knowledge about the history and maintenance of the category, lesbians and gay men.
3. Theoretical perspectives on heterosexuality as a presumptive sexual identity.
4. An understanding of lesbian, gay, bisexual and transgender studies as an academic area of inquiry.
5. An understanding of community politics, dynamics and conflicts.
6. Use-inspired education that culminates in a public presentation.
7. Practical experience in utilizing course work knowledge in the community through an internship or community service project.

*Program Requirement:* The certificate requires 15 credit hours; a minimum of 12 must be upper division. The two required courses are "Introduction to Lesbian, Gay, Bisexual, and Transgender Studies" and the capstone experience. The remaining nine hours are electives from an approved list.

*Enrollment Requirements:* Please contact University College or visit the college's Web site for more information.

*Contact Information:*  
College of Public Programs  
<http://uc.asu.edu/LGBT>  
UCENT 600  
480/965-4464

### **Literature, Writing and Film (certificate) LAMRSCERT**

*Description:* The literature, writing and film certificate offers students the opportunity to develop their skills in professional, academic and imaginative writing, as well as their interpretation of literary and non-literary texts and critical thinking. The focus of the program is on effective writing, critical thinking and sophisticated reading of literary and non-literary texts. The program stresses cultural and information literacy. It encourages the study of texts in their cultural context and stresses the role of media and technology in the reading process. The philosophy of the program is that students should be offered an experience that integrates formal course work, independent and varied research, internships and service opportunities. The program goal is to prepare independent and effective scholars and professionals who can transition seamlessly into careers in writing and teaching and who are well prepared for graduate or further professional study.

*Program Requirement:* The certificate in literature, writing and film consists of 15-18 credit hours: nine credit hours of focus-area courses in their chosen track and six to nine credit hours of electives.

*Enrollment Requirements:* Contact advisors in the School of Letters and Sciences for admission to the certificate program. See <http://sls.asu.edu/humpoly/lwf/advising.html>.

*Contact Information:*

School of Letters and Sciences  
SANCA 233  
hua@asu.edu  
480/727-1526

**Medieval and Renaissance Studies (certificate) LAMRSCERT**

*Description:* An undergraduate certificate in medieval and renaissance studies is offered by the Arizona Center for Medieval and Renaissance Studies (ACMRS). In order to reflect the interdisciplinary nature of the field, the ACMRS has established a certificate program for undergraduate students in medieval and renaissance studies to reflect the interdisciplinary nature of the field.

The program provides students the opportunity to take classes from several disciplines, and to receive training in both Latin, the international language of the periods, and paleography, the study of the physical medium through which Latin and other languages were transmitted. Obtaining the certificate prepares undergraduate students for advanced study, and it augments the skills and knowledge necessary for graduates to succeed in academic positions in their field.

*Program Requirement:* In addition to the course work and examinations required in a student's major field of interest, the following minimum requirements must be fulfilled to earn the certificate:

1. Six credit hours of classical Latin and six credit hours of Latin (classical and/or medieval) or of a vernacular language of the period (e.g., Old English, Old Norse, Old French, Renaissance Italian).
2. Six credit hours of course work in medieval and renaissance studies outside the major discipline.

Students must also complete a thesis writing within the major on a topic concerning the middle ages or renaissance. Student may earn three credit hours of independent study for the thesis. The thesis may be used to fulfill the honors college thesis requirement for students enrolled in the Barrett, the Honors College and a minimum of a "C" (2.00) average in all course work leading to the certificate.

*Enrollment Requirements:* Any student admitted to study at ASU may complete a certificate. To apply to the university, please complete the Office of Admissions online application. Please contact the center for more information: [http://www.asu.edu/clas/acmrs/web\\_pages/academic\\_programs/ac\\_pro\\_certificates.html](http://www.asu.edu/clas/acmrs/web_pages/academic_programs/ac_pro_certificates.html).

*Contact Information:*

Dean, College of Liberal Arts and Sciences

<http://www.asu.edu/clas/acmrs/>  
acmrs@asu.edu  
COOR 4426  
480/965-5900

**Multimedia Writing and Technical Communication (certificate) ECTWCCERT**

*Description:* Through the Multimedia Writing and Technical Communication Program, students learn how to produce, design and manage information, using both traditional and developing technologies.

*Program Requirement:* The undergraduate certificate requires 18 hours. The following courses are required:

TWC 301 General Principles of Multimedia Writing  
TWC 401 Principles of Technical Communication

Choose one of the following courses:

TWC 411 Principles of Visual Communication  
TWC 421 Principles of Writing with Technology  
TWC 431 Principles of Technical Editing

Choose three other 400-level TWC courses, of which at least two must be genre or information courses, such as TWC 443 Proposal Writing or TWC 452 Information in the Digital Age.

*Enrollment Requirements:* Please contact the department for more information:  
<http://techcomm.asu.edu/degrees.shtml>.

*Contact Information:*

School of Letters and Sciences  
<http://techcomm.asu.edu/degrees.shtml>  
SAAS@asu.edu  
SUTON 301  
480/727-5100

**Nonprofit Leadership and Management: American Humanities (certificate) PPNPYCERT**

*Description:* The certificate program in nonprofit leadership and management. American humanics provides 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 a number of nonprofit organizations, including American Red Cross, America's Second Harvest, AmeriCorps, the ARC, Big Brother

Big Sisters, Boys and Girls Clubs, Boy Scouts of America, Camp Adventure, Camp Fire U.S.A., Corporation for National and Community Service, Girls Inc., Girl Scouts of the U.S.A., GuideStar, The Humane Society of the United States, Junior Achievement, March of Dimes, National 4-H Council, National Urban League, Opportunity Knocks.org, Points of Light Foundation, United Way of America, Volunteers of America and Y.M.C.A. of the U.S.A.

*Program Requirement:* 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 bachelor's degree.

### **Required Courses**

- NLM 220 Introduction to Nonprofit Organizations (3)
- NLM 300 Fund Raising and Resource Development (3)
- NLM 310 Volunteer Management (3)
- NLM 320 Professional Development Seminar, which is taken four semesters, for one semester hour each term (4)
- NLM 420 American Humanics Institute (2)
- NLM 430 Managing Nonprofit Organizations (3)
- NLM 463 Senior internship (12)

*Enrollment Requirements:* Applications are accepted throughout the year. Please see the department Web page for more information at <http://www.asu.edu/copp/nonprofit/edu/ah.htm>. To apply, contact:

Senior Program Coordinator

American Humanics

School of Community Resources & Development

University Center (mail code: 4020)

411 N. Central Ave., Suite 550

Phoenix, AZ 85004-0690

Phone: 602-496-0550

Fax: 602-496-0953

E-mail: [scrd@asu.edu](mailto:scrd@asu.edu)

*Contact Information:*

School of Community Resources and Development

<http://scrd.asu.edu>

[scrd@asu.edu](mailto:scrd@asu.edu)

UCENT 550

602/496-0550

### **Philosophy, Politics and Law (certificate) HOPPLCERT**

*Description:* Students enrolled in Barrett, The Honors College may pursue the certificate in philosophy, politics and law. This interdisciplinary program affords an opportunity to engage in a focused program of study that brings analytical rigor to bear on the philosophical issues involved in law and politics.

*Program Requirement:* The concentration comprises six courses (18 credit hours), two of which are offered through Barrett. One of these courses, normally taken in the student's second year at ASU, is a seminar on law, justice and morality (HON 310). The second course is a junior-senior seminar on theories of justice, or a related topic in philosophy, politics and law, that entails an extended paper (HON 410). The remaining four courses must be approved by the philosophy, politics and law council and selected from courses regularly offered in philosophy, political science and other areas.

*Enrollment Requirements:* Students must be in good standing with Barrett, The Honors College or be admitted upon nomination by a member of the philosophy, politics and law faculty and approval by the philosophy, politics and law council. Please contact the department for more information.

#### *Contact Information:*

The Barrett Honors College

[http://honors.asu.edu/w-Philosophy\\_\\_Politics\\_and\\_Law\\_Certificate\\_Program-179.aspx](http://honors.asu.edu/w-Philosophy__Politics_and_Law_Certificate_Program-179.aspx)

IRISH A121

480/965-4033

### **Public Administration and Public Management (certificate) PPPAFCERT**

*Description:* The certificate in public administration and public management prepares students for citizenship, leadership and careers in governmental and non-profit agencies. Students will learn the context and principles of public administration and how to apply these in a practitioner setting; the role of the public administrator in the design, implementation and evaluation of public policy; and how to lead change and address ethical issues in public service. It is designed for undergraduate students who are interested in developing leadership skills or wish to enhance their degree in an existing major at ASU, working adults who may wish to further their education yet may not be looking for a degree program, or B.I.S. students who seek to combine certificates with their degree.

The program is designed for students interested in public service who want to learn skills to:

- Deliver and manage public programs.
- Reform welfare.
- Provide public safety.
- Preserve natural resources.

- Improve the quality of life.
- Build and bridge communities.
- Strengthen democratic governance.
- Analyze critical issues.
- Lead change in public policy.

*Program Requirement:* The certificate in public administration and public management consists of 15 credit hours of course work. Students take 12 hours of core classes and three hours of elective courses. The three hours of elective course work may be selected from an approved list of elective classes, taken upon the recommendation of the department.

### **Core Courses**

PAF 300 Public Management and Public Administration  
 PAF 340 Public Management and Policy  
 PAF 420 Public Leadership  
 PAF 460 Public Service Ethics

*Enrollment Requirements:* There are different application requirements, depending on your enrollment status with ASU. Students are also encouraged to schedule an appointment with the undergraduate academic adviser in the School of Public Affairs.

### **Undergraduate Students Currently Enrolled at ASU**

Current students interested in earning the certificate must complete a request to add an undergraduate certificate and return it to the undergraduate academic advisor in the School of Public Affairs at the University Center on the Downtown Phoenix campus. Students may begin taking courses before they formally register for the certificate; however, they are encouraged to complete the paperwork as soon as possible. Download application from [http://spa.asu.edu/new/undergrad/Certificate%20Request%20Form\\_PPPAFCERT.pdf](http://spa.asu.edu/new/undergrad/Certificate%20Request%20Form_PPPAFCERT.pdf).

### **Individuals Not Currently Enrolled at ASU**

Individuals who are not currently enrolled as students at Arizona State University must complete an application to enroll as a nondegree seeking student before they may begin taking courses. For information on admissions and to complete an application, visit the university's nondegree student admissions page at <http://students.asu.edu/non-degree-student-admission>.

Once students have been admitted, they are eligible to enroll in courses to complete the certificate program.

*Contact Information:*  
 School of Public Affairs

[http://spa.asu.edu/new/undergrad/pa\\_mgt.htm](http://spa.asu.edu/new/undergrad/pa_mgt.htm)  
spa@asu.edu  
UCENT 400  
602/496-0450

### **Religion and Conflict (certificate) LARELCERT**

*Description:* The certificate is open to students in any major, and may be of particular interest for students pursuing careers in journalism, law, policy work, diplomacy, the military, public advocacy, publishing, education, ministry or other fields in which an enhanced understanding of religion and conflict is increasingly vital.

*Program Requirement:* Students must complete 18 credit hours of qualifying course work (at least 12 hours from ASU), consisting of regional, political and cultural components. To ensure that students are exposed to a wide variety of approaches to the study of religion and conflict, an interdisciplinary component requires that at least six of the 18 hours be fulfilled with courses from the humanities and at least three hours from the social sciences. In many cases, the same course can be used to fulfill several component requirements simultaneously.

- **Regional component (6 credits):** courses in this category provide students specific regional knowledge of how religion has been implicated in human conflict. Required course work in at least two different regions fosters a comparative understanding of the dynamics of religion and conflict in historical and global contexts.
- **Political component (3 credits):** courses in this category explore how religion influences, or is influenced by, matters of state, law, government or other dimensions of political life.
- **Cultural component (3 credits):** courses in this category provide students with an understanding of how religion operates as a powerful force that impacts and intersects with expressions of human identity, thought and culture.
- **Electives (6 credits):** any approved/qualifying course may be used as an elective to fulfill remaining requirements toward the total number of credit hours and to meet the interdisciplinary requirement.

#### Religion and Conflict Course Offerings

A minimum grade of “C” (2.00) is required for a course to fulfill a certificate requirement. The following regularized courses may be taken to complete certificate requirements. Not all courses are offered each semester. However, each semester some special topics courses (usually designated 394, 494 or 498) may be taken to fulfill certificate requirements as approved by the certificate director.

#### **Regional Component** (6 credit hours representing two different regions)

Religion and Europe:

HST 350 Later Middle Ages  
HST 352 Europe's Reformation  
HST 355 Total War and the Crisis of Modernity  
HST 361/REL 374 Witchcraft and Heresy in Europe  
REL 377 Religion in Russia  
REL 471 Reformation and Modern Christianity

Religion and the Middle East:

ARB 331 Arabic and Islamic Culture/Literature  
ARB 341/REL 368 Quran Text and Women  
GCU 328 Geography: Middle East/North Africa  
HST 372 Modern Middle East

Religion and the United States:

HST 315 American Politics  
REL 321 Religion in America  
REL 327 American Jews in U.S. Politics  
SOC 394/REL 386 America and the Holocaust\*

Religion in Africa:

GCU 328 Geography: Middle East/North Africa  
POS 359 Faith & Politics in Africa\*

Religion in Asia:

HST 352 Chinese Cultural History  
REL 357 Theravada Buddhism in South and S.E. Asia  
REL 377 Religion in Russia

**Political Component (3 credit hours)**

HST 315 American Politics  
HST 355 Total War and the Crisis of Modernity  
HST 372 Modern Middle East  
POS 359 Faith and Politics in Africa\*  
POS 364 National Security/International Terrorism\*  
REL 327 American Jews in U.S. Politics  
REL 364 Islam and World Affairs  
REL 379 Religion, Nationalism and Ethnic Conflict  
REL 380 Theology of Terror: Bin Laden and others  
REL 388 Religion, Ethics and International Politics  
SGS 324/REL 480 Religion and Global Politics\*

**Cultural Component (3 credit hours)**

ARB 331 Arabic & Islamic Culture/Literature  
ARB 341/REL 368 Quran Text and Women  
FMS 474/REL 313 Anti-Semitism in Modern Times

HST 352 Europe's Reformations  
HST 361/REL 374 Witchcraft and Heresy in Europe  
HST 452 Chinese Cultural History  
POR 497 Afro-Brazilian Maroon Poetry  
REL 201 Religion and the Modern World  
REL 321 Religion in America  
REL 352 Modern Buddhism  
REL 357 Theravada Buddhism: South/S.E. Asia  
REL 366 Islam in the Modern World  
REL 377 Religion in Russia  
REL 381 Religion and Moral Issues  
REL 392 Religious Encounters in Post-colonial and Globalized Space  
REL 461 Different Voices within Contemporary Islamic Discourse  
REL 471 Reformation and Modern Christianity  
REL 481 Religion and Bioethics  
REL 482 Religion, Violence and Conflict resolution  
REL 483 Religion and Science  
SOC 394/REL 386 America and the Holocaust\*  
WST 377 Women and Violence\*

**Electives (6 hours)**

Remaining credit hours may be filled by taking courses listed above or other courses, including special topic courses, as approved by the certificate director.

Examples of special topics courses taught in the last few years include:

POS 394/HEB 394 War and Peace in the Middle East\*  
REL 394 Religion and the American Presidency  
SGS 394 Violence, Conflict, and Human Rights\*  
WST 498 Women, Religion, and Global Violence\*

**Interdisciplinary Requirement**

Of the 18 total credits taken to fulfill the certificate, at least three credits from the social sciences (SOC, POS, SGS or WST, noted with an "\*\*") and six credits from the humanities (ARB, HST, POR or REL). The interdisciplinary requirement can be met through any course listed above, except GCU 328.

\* Denotes social science course.

*Enrollment Requirements:* Any ASU student may pursue the religion and conflict certificate. Please complete the registration form, and e-mail it to the certificate director. Please direct questions about the program to the certificate director.

*Contact Information:*

School of Historical and Critical Inquiry

[http://www.csrc.asu.edu/education/undergraduate\\_certificate.html](http://www.csrc.asu.edu/education/undergraduate_certificate.html)

**Russian and East European Studies (certificate) LAREECERT**

*Description:* The certificate in Russian and East European studies encourages students to develop special competency in Russian or East European languages and area studies. Course work leading to the certificate is offered by the departments of agribusiness, anthropology, architecture, economics, geography, history, political science, religious studies, Russian, sociology and women's studies, but the certificate program is open to all students, regardless of major.

Certificate holders enhance their prospects for study abroad fellowships and graduate admissions, and also qualify for unique entry-level government employment opportunities. Past certificate awardees have moved into positions of leadership in government, academia and the private sector.

*Program Requirement:* The requirements for the Russian and East European studies certificate comprise:

1. Three years (22 credit hours) of Russian or another Eurasian or East European language.
2. Thirty upper-division credit hours in Russian, East European and Eurasian area-related course work.

At least three disciplines must be represented in the area-related course work, and at least 12 credit hours must be outside the School of International Letters and Cultures (i.e., non-RUS and non-FLA courses). Fulfillment of these requirements is certified by the Russian and East European Studies Center and is recognized on the transcript as a certificate in Russian and East European studies. The purpose of this undergraduate certificate program is to encourage students majoring in a chosen discipline to develop special competency in Russian or East European language and area studies. A student with a major in any department may pursue this certificate.

*Enrollment Requirements:* Any student admitted to study at ASU may pursue a certificate program. In order to apply to study at ASU, complete the Office of Admission online application. Please contact the Melikian Center for more information.

*Contact Information:*

Dean, College of Liberal Arts and Sciences

<http://melikian.asu.edu/>

[melikiancenter@asu.edu](mailto:melikiancenter@asu.edu)

COOR 4455

480/965-4188

### **Small Business and Entrepreneurship (certificate) BASMBCERT**

*Description:* Students learn how to launch their own business or work with small or startup operations. Courses include small business and entrepreneurship and business plan development. Classroom work is complemented by frequent interaction with successful founders and leaders of entrepreneurial ventures.

*Program Requirement:* This certificate in small business and entrepreneurship is available only to business majors at ASU. The certificate requires 15 credit hours of classes, including the following six credit hours:

MGT 440 Small Business and Entrepreneurship (3)  
MGT 445 Business Plan Development (3)

The remaining nine credit hours consist of three additional upper-division courses relevant to small business. A copy of the approved electives for business majors pursuing the certificate in small business and entrepreneurship is available in the undergraduate programs office, BA 109. To receive the certificate, students must complete the specified business courses with a grade of "C" (2.00) or higher.

*Enrollment Requirements:* Please contact the department for more information.

#### *Contact Information:*

Dean, W.P. Carey School of Business  
<https://wpcarey.asu.edu>  
wpcareyug@asu.edu  
BA 109  
480/965-4227

### **Southeast Asian Studies (certificate) LASALCERT**

*Description:* The certificate in Southeast Asian studies can supplement a bachelor's degree, demonstrating knowledge of a Southeast Asian language and knowledge of Southeast Asian history, art, culture and society.

This certificate prepares students for admission to graduate programs in Southeast Asian-area studies or in an academic discipline with a focus on Southeast Asia, or for professional programs in international law or business.

Recent graduates have gone on to enter medical school, M.B.A. programs and doctoral programs. An earned certificate will appear on student transcripts as a Southeast Asian studies emphasis.

*Program Requirement:* A certificate in Southeast Asian studies is available to any undergraduate student. The certificate program requires a simultaneous two-year sequence in a Southeast Asian language (Indonesian, Thai or Vietnamese) and 18 credit hours, including the courses listed below. The curriculum includes:

ASB/GCU/HST/POS/REL 240 Introduction to Southeast Asia  
ASB 325 Peoples of Southeast Asia  
HST 391 Modern Southeast Asia

Two electives, selected from an approved course list.

*Enrollment Requirements:* There are no specific admission requirements other than a student's desire to learn about Southeast Asia. A minimum grade of "C" (2.00) is required for each course that is used to fulfill the certificate requirements. Please contact the department for more information:  
<http://www.asu.edu/clas/asian/certificate.html>.

*Contact Information:*

Dean, College of Liberal Arts and Sciences  
[http://www.asu.edu/clas/asian/  
car@asu.edu](http://www.asu.edu/clas/asian/car@asu.edu)  
COOR 6th  
480/965-7184

**Spa Management (certificate) ECEXWCERT**

*Description:* The certificate in spa management was designed and implemented in response to a rapidly growing spa industry, which has identified a real need for more directors, assistant directors and supervisors, and for management candidates with formal education and training in spa administration.

*Program Requirement:* The spa management certificate program is a nondegree, 34-credit-hour program designed to prepare students for careers in spa administration. The required courses meet a comprehensive list of core competencies identified by the spa industry and an advisory committee of spa directors. This certificate is recognized by the International Spa Association, and it significantly enhances a graduate's opportunity for placement and advancement within the industry.

The following are required courses, with a total of 34 credit hours:

BUA 381 Small Business Accounting and Finance (3)  
BUA 382 Small Business Sales and Market Development (3)  
BUA 383 Small Business Working Relationships (3)  
EXW 325 Fitness for Life (3)  
EXW 400 Stress Management for Wellness (3)  
EXW 484 Exercise and Wellness Internship (6)  
EXW 498 Pro Seminar: Spa Management I (2)  
HHS 300 Overview of Complementary Health Systems (3)  
NTR 345 Development of Healthy Cuisines (3)  
OMT 494 Organizational Leadership (3)  
WED 165 Overview of Massage Therapy\* (2)

\*This course is offered through Chandler-Gilbert Community College. Students must receive a grade of "C" (2.00) or higher in every course to earn the certificate. Any course in which a student fails to earn a "C" (2.00) or higher must be repeated.

*Enrollment Requirements:* Admission to the spa management certificate program is limited. Each applicant is evaluated based on a rubric that includes:

1. Years of higher education completed and cumulative GPA.
2. Experience in the spa industry or a wellness-related field.
3. Resume.
4. Three references.
5. Letter of intent.

Please contact the department for more information at <http://www.poly.asu.edu/saas/wellness/spa/>.

*Contact Information:*

College of Nursing & Health Innovation  
<http://www.poly.asu.edu/saas/wellness>  
wellness@asu.edu  
EAW 109  
480/727-1945

**Special Events Management (certificate) HSRTMUERT**

*Description:* The special events management certificate is a career enhancement program offered to nondegree-seeking students or those who already have a degree from an accredited university in any major, or students currently pursuing a bachelor's degree in any major.

*Program Requirement:* The certificate requires a total of 21 credit hours, 15 credit hours of required core courses and six credits of electives. Courses taken as part of a university major may count towards both that degree and the certificate. To earn the certificate, students must complete all course work in the certificate with a minimum grade of "C" (2.00) or higher. An application to the program is required.

Required Core Courses, for a total of 15 credits:

- RTM 486 Special Event Management (3)\*
- RTM 303 Programming Recreation and Tourism Services (3) or RTM 320 Talent and Entertainment Concepts (1)
- RTM 321 Event Protocol, Ethics and Etiquette (1)
- RTM 322 Special Event Programming (1)
- RTM 323 Special Event On-Site Operations (1)
- RTM 324 Festival Site Design (1)
- RTM 325 Working with Subcontractors and Vendors (1)
- RTM 326 Sponsorship (1)
- RTM 327 Creative Event Revenue Production (1)

RTM 328 Accounting for Special Events(1)  
RTM 388 Business Practices for Special Events Management (3)

Electives, for a total of six credits:

RTM 373 Leisure, Travel and Tourism (3)  
RTM 345 Meeting and Convention Planning (3)  
RTM 404 Marketing Recreation and Tourism (3)  
RTM 451 Grant Writing for Human Service Professionals (3)  
RTM 453 Volunteer Management in Human Service Organizations (3)  
RTM 475 Entrepreneurial Recreation and Tourism (3)  
RTM 487 Special Events Advanced (3)

\*RTM 486 must be taken prior to any other RTM core courses except 303.

*Enrollment Requirements:* Please contact the department for more information.

*Contact Information:*

School of Community Resources and Development  
<http://scrd.asu.edu/>  
UCENT 500  
scrd@asu.edu  
602/496-0550

**Symbolic Systems (certificate) LAPHICERT**

*Description:* The School of Historical and Critical Inquiry offers a certificate in symbolic systems. The certificate program takes an interdisciplinary approach to cognition, computation and meaning.

Course work is divided evenly between philosophy, psychology and computer science in order to expose students to the subject matter from a conceptual, empirical and practical point of view.

The certificate may interest students with majors in any of the three disciplines, or students who wish to add breadth to their degree through work in other disciplines, on topics of common interest.

*Program Requirement:* The certificate in symbolic systems consists of 28 credit hours approved by an advisor in the Department of Philosophy and divided evenly between computer science and engineering, psychology and philosophy as follows:

CSE 200, 210 and 240  
PSY 230 and 290 and either PSY 323, 324 or 437  
One of either PHI 319 or 333  
Either PHI 315 or 317  
Either PHI 312 or 314

Students must satisfy the prerequisites for the listed courses. With written approval from the director of undergraduates studies in the school, one substitution course from outside this list may be allowed.

All courses must be passed with a minimum grade of "C" (2.00).

*Enrollment Requirements:* Any student admitted to study at ASU may complete a certificate. To apply to the university, please complete the Office of Admissions online application. Please contact the department for more information.

*Contact Information:*

School of Historical and Critical Inquiry  
<http://www.asu.edu/clas/philosophy/>  
philosophy@asu.edu  
COOR 3309  
480/965-3394

### **Technology Entrepreneurship (certificate) ESTNECERT**

*Description:* Engineers and scientists around the globe launch high-tech companies to move their ideas to the market. Studies show that the majority of innovative products and services in the economy evolve from entrepreneurial ventures. By providing knowledge and skills important to the creation and leadership of such startups, the certificate program in technology entrepreneurship aims to train the founders and leaders of tomorrow's high-tech ventures. The certificate program is designed specifically for engineers. Courses are approached from the perspective of the student whose primary interest is in technological innovation, whose primary concentration is engineering and who has little or no prior business education.

*Program Requirement:* This 15-credit-hour certificate program is limited to students in the Ira A. Fulton School of Engineering and is designed to help technically oriented students analyze, launch and operate an entrepreneurial venture. The certificate program in technology entrepreneurship requires that students enroll in and complete five courses. Admission to the cohort portion of the certificate program can only occur after successful completion of the introduction course, FSE 301 Entrepreneurship for Engineers (prerequisite: junior standing in a bachelor's program in the Ira A. Fulton School of Engineering). Once admitted to the certificate program, students must also successfully complete the remaining certificate courses:

- FSE 400 Creating and Launching a Technology Venture
- FSE 401 Intellectual Property for a Technology Venture
- FSE 402 Operating a Technology Venture
- FSE 403 Entrepreneurship Practicum

*Enrollment Requirements:* The qualifications for admission to the certificate in technology entrepreneurship program are having junior standing in a bachelor's

program in the Ira A. Fulton School of Engineering (Engineering) and successful completing the selection interview process.

The selection interview process consists of two parts:

1. A letter of intent written by the student to the selection committee.
2. A live interview with the selection committee, which consists of at least one faculty member, one entrepreneurship program advisory board member and one member of the regular engineering faculty.

Each selection interview is conducted according to a fixed format, with each certificate program candidate having the opportunity to respond to the same set of questions. Please contact the department for more information:  
<http://www.fulton.asu.edu/fulton/school/entrepreneurship/epobusiness.php>.

*Contact Information:*

Dean, Ira A. Fulton School of Engineering  
<http://www.fulton.asu.edu/entrepreneurship/info.entrepreneur@asu.edu>  
BYENG 669  
480/965-2825

### **Translation (certificate) LASPACERT**

*Description:* The translation certificate program is designed to provide:

1. Advanced training required for professional translation in both public and private sectors.
2. Preparation for the rigorous examinations required by national and international agencies.
3. Training as an ancillary skill for professional fields, such as international business, public health, medicine and law, in accordance with guidelines recommended by the American Translators Association.

*Program Requirement:* The certificate program consists of the following requirements:

#### **Prerequisites**

SLC 400 Linguistics, SB (3) or SPA 400 Introduction to Spanish Linguistics (3) or equivalent SPA 412 Advanced Conversation and Composition, G (3)

#### **Required**

1. SLC 401 Translation Theory and Practice (3)
2. In-service practicum, SLC 484 Internship (2)

Also required are nine hours of applied translation electives in specialized areas chosen from the following courses:

- SLC 481 Technical and Scientific Translation (3)
- SLC 482 Business and Financial Translation (3)
- SLC 483 Medical and Legal Translation (3)
- SLC 485 Problems of Literary Translation (3)

*Enrollment Requirements:* Since entrance to professional translation is through work, cultural experience and examination, the entrance requirements to this certificate program are:

1. A written proficiency examination in the source and the receptor languages at the level of completion of an advanced composition course in Spanish (SPA 412) and English (ENG 301).
2. Extensive work experience using Spanish and English, or demonstrated bilingual writing competence in English and Spanish.

Please contact the school for more information.

*Contact Information:*

School of International Letters and Cultures  
<http://silc.asu.edu/undergraduate/certificates>  
silc@asu.edu  
LL 440  
480/965-6281

**Women and Gender Studies (certificate) LAWSTCERT**

*Description:* Women and gender studies, in the School of Social Transformation provides students with an intensive interdisciplinary liberal arts education that enables them to write well, think critically and analyze problems effectively. The certificate program is equivalent to an interdisciplinary minor.

*Program Requirement:* The certificate program consists of 18 credit hours, 12 of which must be upper-division courses. Students pursuing a certificate in women and gender studies must consult with the women and gender studies advisor to select appropriate courses and fulfill requirements. A certificate of concentration in women and gender studies is awarded for the successful completion of WST 100 (or WST 300) and WST 377, or WST 378 and an additional 12 credit hours from the list of approved women and gender studies courses.

*Enrollment Requirements:* Any student admitted to study at ASU may complete a certificate. To apply to the university, please complete the Office of Admissions online application. Please contact the women and gender academic specialist in the school for more information.

*Contact Information:*

School of Social Transformation

<http://wgs.asu.edu/>

[wgs.asutempe@asu.edu](mailto:wgs.asutempe@asu.edu)

WHALL 205

480/965-2358

**Women's Studies (certificate) ASWSTCERT**

*Description:* The certificate in women's studies within the New College of Interdisciplinary Arts and Sciences is an interdisciplinary program emphasizing intersectional approaches to the study of gender, race, class, ethnicity and sexuality in national and transnational contexts. The women's studies certificate is recommended for graduate students, nondegree students and students majoring in professional programs.

*Program Requirement:* The women's studies certificate consists of 18 credit hours of course work.

Students are required to choose three courses (nine credit hours) from the following core: WST 100 or WST 300; WST 350, WST 376, WST 457 or WST 498. Additionally, students are required to select a total of nine credit hours from courses in the following areas:

- Global perspectives.
- Representation and culture studies.
- Gender studies.
- Applied women's studies.

**Core Requirements:**

WST 100 Women and Society, SB, C (3) or WST 300 Women in Contemporary Society, SB, C (3)

Choose two of the following courses, six credits:

WST 350 Race, Class and Gender, SB, C (3)

WST 376 Feminist Theory, L, C (3)

WST 457 Women, Cultures and Societies, SB, G (3)

WST 498 PS: Theory and Method in Women's Studies, L (3)

**Additional Requirements, nine credits:**

Select nine credit hours from three of the four following areas:

**Global Perspectives Courses**

WST 330 Women on the Borderlands (3)  
WST 390 Women and World Religions, L/SB, G (3)  
WST 475 Women of the Diaspora Across Cultures, HU, G (3)  
WST 483 Women writers Across Cultures, HU, G (3)  
WST 487 Gender and International Development, SB, G (3)

### **Representation and Culture Studies Courses**

WST 320 Women in Popular Culture, HU, C (3)  
WST 370 Chronicling Women's Lives, HU, C (3)  
WST 431 Women and Film, L, G (3)  
WST 467 Ethnic Women Writers, L/HU, C (3)  
WST 473 Latina/Chicana Representation, SB, C

### **Gender Studies Courses**

WST 276 Feminist foundations: Going to the Sources, H (3)  
WST 333 Critical Perspectives on Sexuality, SB, C (3)  
WST 444 Women and Health, SB (3)

### **Applied Women's Studies Courses**

WST 482 Gender Issues in Education, (3)  
WST 484 Internship, (3)  
WST 485 Women, Gender and Leadership, SB, C (3)  
WST 499 Individualized Instruction (3)

*Enrollment Requirements:* The certificate in women's studies is open to all undergraduate majors. However, students should consult with the advisors in the department of their major to determine if the minor is consistent with their educational goals. Students are encouraged to take courses outside their major and college. Please contact the department for more information and see [http://newcollege.asu.edu/programs/womens\\_studies/minor\\_cert/](http://newcollege.asu.edu/programs/womens_studies/minor_cert/).

#### *Contact Information:*

Division of Humanities, Arts, and Cultural Studies  
[http://newcollege.asu.edu/programs/womens\\_studies/](http://newcollege.asu.edu/programs/womens_studies/)  
harc.dept@asu.edu  
FAB N290  
602/543-4444

### **Writing (certificate) LAENGCERT**

*Description:* The writing certificate is a declaration from ASU that a student has completed 19 credit hours of advanced writing instruction. It certifies that the student has had the training to be a successful writer in his or her chosen profession.

*Program Requirement:* The writing certificate consists of 19 credit hours. Required courses are as follows:

ENG 216 Persuasive Writing on Public Issues, L (3) or ENG 412 Creative Nonfiction (3)  
ENG 301 Writing for the Professions, L (3)  
ENG 372 Document Production, L (3)  
ENG 472 Rhetorical Studies, L (3)  
ENG 484 Internship: Writing Certificate (3)  
ENG 498 Pro-Seminar: Writing Certificate Portfolio (1)

Also required is an additional writing course in English (three hours) or a writing or design course (three hours) selected from an approved list of courses from across campus. All students are required to submit a portfolio before receiving the certificate.

*Enrollment Requirements:* Application to the program requires a minimum GPA of 3.00 in ENG 101 and 102, 105, or 107 and 108. Students must also have completed at least 30 hours of course work and must have a minimum cumulative GPA of 3.00. Please contact the department for more information.

*Contact Information:*

Department of English  
<http://english.clas.asu.edu/writingcertificate>  
[englishadvising@asu.edu](mailto:englishadvising@asu.edu)  
LL 542  
480/965-3168

**Writing Program (certificate) ASWRTCERT**

*Description:* The Division of Humanities, Arts, and Cultural Studies offers a program for students enrolled in any unit of any college at ASU leading to a certificate in nonfiction and disciplinary writing. Certification of advanced writing skills opens the way to a vast array of opportunities, from journalism and publishing to public advocacy, military and government careers, elementary and secondary education, business management, economic development, the law and high-tech industry. Ability to communicate clearly and directly is a key to career advancement in all aspects of business, government and community service.

*Program Requirement:* Comprised of a minimum of 19 credit hours, the Writing Certificate Program combines intensive course work, of which at least 12 credit hours must be upper-division, a possible internship, or a capstone project in the student's major and an exit portfolio. Several special aspects make it possible to combine these credits with general studies or major requirements.

**Capstone Project:** A capstone writing project in the student's major (or AMS 498) or an approved course from the student's major.

Exit Portfolio: Students will assemble a portfolio of writing that demonstrates their grasp of the skills presented during their course of studies, for which they will earn another credit hour.

*Enrollment Requirements:* To gain admission to the Writing Certificate Program, students must demonstrate fundamental writing skills through the completion of English composition (101/102, or 107/108, or 105) with grades of B<sup>+</sup> (3.00) or higher. Students are required to submit an application, which includes at least three samples of writing from lower-division courses or independent writing projects. Applications must be submitted at least two months before the start of the semester they anticipate being admitted.

*Contact Information:*

Division of Humanities, Arts, and Cultural Studies

<http://newcollege.asu.edu/programs/>

harcs.dept@asu.edu

FAB N 290

602/543-4444

## Undergraduate Programs

### Undergraduate Degrees (Program Descriptions)

#### Business, W. P. Carey School of

##### Accountancy (BS) BAACCBS

W.P. Carey School of Business

*Program Description:* The accounting profession offers W. P. Carey students a dynamic environment and diverse career opportunities in public accounting, the private sector and in government agencies worldwide. The School of Accountancy's state-of-the-art curriculum provides students with technical expertise in the field and develops critical thinking, teaming, communication and information technology skills that are crucial for a successful career. The faculty includes leaders who excel in the classroom, and our professional advisory board provides regular guidance on continuous improvement and strategic planning. The School of Accountancy is accredited by Association to Advance Collegiate Schools of Business International and is consistently ranked among the top programs in the nation in bachelor's, master's and Ph.D. programs.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* Freshmen admission requirements: 1160 SAT Reasoning OR 25 ACT score, OR graduated in the top eight percent of high school class.

Freshmen should select an additional major when applying for admission. Additional choices may include any of the W. P. Carey's Business BA programs or any other business or other degree program outside W. P. Carey School of Business. Students who are not admissible to a W. P. Carey Business BS major and who did not select a second major or are not admissible to their second major choice will be placed in a Business BA program in W. P. Carey School of Business.

Transfer admission requirements (30 or more semester hours of credit after high school): 3.00 transfer GPA AND 1160 SAT score OR 25 ACT score OR graduated in the top eight percent of high school class.

Transfer students should select an additional major when applying for admission. Additional choices may include any of the W. P. Carey's Business BA programs or any other business or other degree program outside W. P. Carey School of Business.

Students with less than 45 transfer hours who are not admissible to a W. P. Carey School of Business major and who did not select a second major or are not admissible to their second major choice will be placed in Exploratory--Social and Behavioral Sciences in University College.

Students with more than 45 transfer hours who are not admissible to University College will be contacted to select an appropriate major.

*Career Opportunities:* The major in accountancy includes the essential academic preparation for students who are:

- Pursuing professional careers in public, corporate and governmental accounting.
- Seeking positions in personal financial planning and portfolio analysis.
- Seeking positions in consulting; planning to operate their own businesses.
- Planning to pursue a graduate degree or attend law school.

The job outlook for accounting graduates is excellent. The U.S. Bureau of Labor Statistics' Occupational Outlook Handbook (2008-2009) states that, "Employment of accountants and auditors is expected to grow by 18 percent between 2006 and 2016, which is faster than the average for all occupations."

*Contact:*

School of Accountancy  
<http://wpcarey.asu.edu/acc>  
wpcareyacc@asu.edu  
BA 223Q  
480/965-3631

### **Agribusiness (Agribusiness Science) (BS) AGAGBPBS**

W. P. Carey School of Business

*Program Description:* A unique program offers students studying agribusiness an opportunity to prepare for admission to professional veterinary schools. Through the B.S. in agribusiness (with a concentration in preveterinary medicine) program, students can elect to apply to veterinary college at the end of their third year at ASU and use the first year credits at the veterinary college to complete their B.S. at ASU. While completing the courses needed for acceptance into veterinary school, the student is broadening his or her career potential with agribusiness courses. Should a preveterinary student decide not to apply to a veterinary school, this major provides alternative career paths into human or veterinary pharmaceutical industries or the food industry.

*Language Requirement:* N | *Program Fee:* Y

Minimum Math Requirement: MAT 210 - Brief Calculus.

*Career Opportunities:* Veterinarians have a vast spectrum of career opportunities, including private practice, biotechnology research and positions in federal and state governmental agencies.

*Contact:*

<http://www.poly.asu.edu/msma/>

PRLTA 330

agbiz@asu.edu

480/727-1585

**Agribusiness (Global Agribusiness) (BS) AGAGBGBS**

W.P. Carey School of Business

*Program Description:* The agribusiness major is an applied, industry-oriented curriculum. The study of the food and fiber system in the U.S. and around the world forms the basis of this particular program.

The general agribusiness concentration, under B.S. in agribusiness, is specifically designed to meet the needs of the urban student interested in business and agriculture. Students learn to analyze firms involved in input and output supply activities, commodity trading, food manufacturing and food distribution.

*Language Requirement:* N | *Program Fee:* Y

*Career Opportunities:* Agribusiness is a dynamic industry providing employment to about 23 percent of the U.S. labor force. Opportunities exist in management, marketing, finance and technical positions with private agribusiness firms and governmental agencies.

*Contact:*

Morrison School of Management and Agribusiness

<http://www.poly.asu.edu/msma/>

morrisonsschool@asu.edu

PRLTA 30

480/727-1585

**Agribusiness (Professional Golf Management) (BS) AGAGBMBS**

W.P. Carey School of Business

Not accepting applications.

*Program Description:* Pending approval of the Arizona Board of Regents and consultation with the ASU University Senate, this program will no longer accept applications.

The professional golf management concentration, under the B.S. in agribusiness, is designed to prepare students for management careers in the golf industry. This program is appropriate for students who are skilled players and want to pursue a career on the player side of the business, such as a club professional. Students develop business skills and competencies while also becoming Professional Golfers' Association Class A professionals.

*Language Requirement: N | Program Fee: Y*

*Career Opportunities:* Golf is a billion-dollar-a-year industry in Arizona. Nationwide, more than 400 new golf courses will be built annually in the next 10 years. As a result, management careers in the golf industry, such as club professional, are abundant and the salaries are attractive.

*Contact:*

Morrison School of Management and Agribusiness

<http://www.poly.asu.edu/msma/>

morrisonsschool@asu.edu

PRLTA 330

480/727-1585

### **Business (Communication) (BA) BABUSCBA**

W.P. Carey School of Business

*Program Description:* The B.A. in business with a communication concentration is an innovative, interdisciplinary program intended to prepare students for positions in a variety of professions where business and communication play an important role in ensuring success. Graduates of this program will have specific knowledge of business practices and the capacity to effectively communicate complex business information. Students in this program will complete rigorous courses within the communication concentration in addition to the skill and core courses required of all W. P. Carey School of Business majors.

*Language Requirement: N | Program Fee: Y*

*Admission Requirements:* Freshman and transfer students must submit either an SAT Reasoning test score or an ACT test score by the end of the first semester in the program (we do not require the writing portion of these tests). There is no minimum score requirement.

Freshman admission requirements for this program are the same as the university's freshman admission requirements.

Transfer applicants must have a 3.00 GPA for all transfer work and meet university transfer admission requirements. Transfer students should select an additional major, which must be outside W. P. Carey School of Business, when applying for admission.

Students with less than 45 transfer hours who are not admissible to a W. P. Carey School of Business major and who did not select a second major or are not admissible to their second major choice will be placed in Exploratory--Social and Behavioral Sciences in University College.

Students with more than 45 transfer hours who are not admissible to University College will be contacted to select an appropriate major.

*Career Opportunities:* Business communication has exploded as a distinct professional field as companies require rapid and considered responses, from conveying ordinary information to crisis communications. Historically these positions have been staffed with people trained in communication, English, journalism or other fields who lack specific business knowledge. Graduates of this program will be qualified to enter these positions with knowledge that will be immediately useful to potential employers while advancing their careers.

*Contact:*

W. P. Carey School of Business  
<http://wpcarey.asu.edu>  
wpcareyug@asu.edu  
BA 109  
480/965-4227

**Business (Global Leadership) (BA) BABUSGBA**

Program information not available at time of publication.

Not accepting applications.

*Contact Information:*

W. P. Carey School of Business  
<http://wpcarey.asu.edu/>  
BA 109  
wpcareyug@asu.edu  
480/965-4227

**Business (Sustainability) (BA) BABUSSBA**

W.P. Carey School of Business

*Program Description:* The B.A. in business with a sustainability concentration is an innovative, interdisciplinary program intended to prepare students for positions in a variety of professions where business and sustainability play an important role in ensuring success. Finding ways to grow and prosper while reducing the stress on the global environment is a critical issue facing today's society. Combining the latest trends in business with cutting-edge knowledge of sustainability prepares graduates to excel in a career area that will dramatically increase in demand. Students in this program will complete rigorous courses within the sustainability concentration in addition to the skill and core courses required of all W. P. Carey School of Business majors.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* Freshman and transfer students must submit either an SAT Reasoning test score or an ACT test score by the end of the first semester in the program (we do not require the writing portion of these tests). There is no minimum score requirement.

Freshman admission requirements for this program are the same as the university's freshman admission requirements.

Transfer applicants must have a 3.00 GPA for all transfer work and meet university transfer admission requirements. Transfer students should select an additional major, which must be outside W. P. Carey School of Business, when applying for admission.

Students with less than 45 transfer hours who are not admissible to a W. P. Carey School of Business major and who did not select a second major or are not admissible to their second major choice will be placed in Exploratory--Social and Behavioral Sciences in University College.

Students with more than 45 transfer hours who are not admissible to University College will be contacted to select an appropriate major.

*Career Opportunities:* Interest in sustainability issues is growing and, most likely, will be increasingly important to business in the next few years. Businesses all over the world are asking serious questions about how they can understand, evaluate and act on issues related to sustainability while making sensible business decisions for both the short and long run. They seek qualified individuals who understand the societal, scientific and business aspects of the issues. Graduates from this degree program will fill these needs.

*Contact:*

W. P. Carey School of Business  
<http://wpcarey.asu.edu>  
wpcareyug@asu.edu  
BA 109  
480/965-4227

**Business (Tourism) (BA) BABUSTBA**

W.P. Carey School of Business

*Program Description:* The B.A. in business with a tourism concentration is an innovative, interdisciplinary program intended to prepare students for positions in a variety of professions where business and tourism play an important role in ensuring success. Developing tourism and recreation opportunities requires an understanding of effective marketing techniques and the ability to interact with many different types of businesses that support those efforts. A solid academic preparation in business will help prepare you for success in the tourism industry and affiliated professions. Students in this program will complete rigorous courses within the tourism concentration in addition to the skill and core courses required of all W. P. Carey School of Business majors.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* Freshman and transfer students must submit either an SAT Reasoning test score or an ACT test score by the end of the first semester in the program (we do not require the writing portion of these tests). There is no minimum score requirement.

Freshman admission requirements for this program are the same as the university's freshman admission requirements.

Transfer applicants must have a 3.00 GPA for all transfer work and meet university transfer admission requirements. Transfer students should select an additional major, which must be outside W. P. Carey School of Business, when applying for admission.

Students with less than 45 transfer hours who are not admissible to a W. P. Carey School of Business major and who did not select a second major or are not admissible to their second major choice will be placed in Exploratory--Social and Behavioral Sciences in University College.

Students with more than 45 transfer hours who are not admissible to University College will be contacted to select an appropriate major.

*Career Opportunities:* Tourism management and development combines marketing and economic development, with emphasis on managerial understanding to promote smooth operations. The combination of skills acquired from exposure to both business and tourism courses will make these graduates more marketable and productive in their careers.

*Contact:*

W. P. Carey School of Business  
<http://wpcarey.asu.edu>  
wpcareyug@asu.edu  
BA 109  
480/965-4227

**Business (Urban Policy) (BA) BABUSUBA**

W.P. Carey School of Business

*Program Description:* The B.A. in business with an urban policy concentration is an innovative, interdisciplinary program intended to prepare students for positions in a variety of professions where business and urban policy play an important role in ensuring success. Economic development and urban planning are inextricably linked. The urban policy concentration will prepare you to address many of the challenges of rapid urban growth. Students in this program will complete rigorous courses that focus on the complexity and range of issues affecting the quality of urban planning and development in addition to the skill and core courses required of all W. P. Carey School of Business majors.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* Freshman and transfer students must submit either an SAT Reasoning test score or an ACT test score by the end of the first semester in the program (we do not require the writing portion of these tests). There is no minimum score requirement.

Freshman admission requirements for this program are the same as the university's freshman admission requirements.

Transfer applicants must have a 3.00 GPA for all transfer work and meet university transfer admission requirements. Transfer students should select an additional major, which must be outside W. P. Carey School of Business, when applying for admission.

Students with less than 45 transfer hours who are not admissible to a W. P. Carey School of Business major and who did not select a second major or are not admissible to their second major choice will be placed in Exploratory--Social and Behavioral Sciences in University College.

Students with more than 45 transfer hours who are not admissible to University College will be contacted to select an appropriate major.

*Career Opportunities:* Historically urban planners have had little business background, but function in a system where business success is a key ingredient in high-quality, dynamic, urban policy. Graduates with a B.A. in business with an urban policy concentration will be equipped to deal with the wide range of economic and business development issues.

*Contact:*

W. P. Carey School of Business  
<http://wpcarey.asu.edu>  
wpcareyug@asu.edu  
BA 109  
480/965-4227

**Business Administration (BS) AGBUABS**

W.P. Carey School of Business

*Program Description:* Business administration is the study of the fundamental functions and activities performed in profit-seeking and nonprofit organizations. The B.S. in business administration degree program enables students to gain essential business competencies, knowledge of business disciplines and methods and an appreciation for contemporary business environments and cultures.

*Language Requirement:* N | *Program Fee:* Y

*Career Opportunities:* Business graduates are prepared for careers that require broad background and general knowledge in the field of business is required. Graduates may choose to enter one of the areas of business or industry for which

their emphasis on business fundamentals prepares them, start their own businesses or pursue careers with local, state or federal government. Some graduates choose to continue their education by enrolling in graduate programs or law school.

*Contact:*

Morrison School of Management and Agribusiness  
<http://www.poly.asu.edu/msma/>  
morrison.school@asu.edu  
PRLTA 330  
480/727-1585

**Business Administration (Financial Services) (BS) AGBUAFBS**

W.P. Carey School of Business

*Program Description:* Students in the B.S. in business administration with a concentration in financial services gain an understanding of risk management, sales/sales management, industry analysis and financial management. Current and future national financial dialog all revolve around the essential need to plan and prepare personally for one's economic future. Individuals with an understanding of finance, risk assessment and financial marketplaces will be in very high demand.

*Language Requirement:* N | *Program Fee:* Y

*Career Opportunities:* The B.S. in business administration with a concentration in financial services is provides students with significant career potential. Graduates from the program are expected to grasp both business and financial industry fundamentals. Career opportunities exist domestically and internationally in fields such as financial services consulting, risk management, financial industry analysis and insurance.

*Contact:*

Morrison School of Management and Agribusiness  
<http://www.poly.asu.edu/msma/>  
morrison.school@asu.edu  
PRLTA 330  
480/727-1287

**Business Administration (Retail Management) (BS) AGBUARBS**

W.P. Carey School of Business

*Program Description:* The B.S. in business administration with a concentration in retail management is an exciting academic discipline that combines the interpersonal skills of marketing and sales with the analytical skills of finance. Successful food and nonfood retail managers should possess an understanding of customer service along with knowledge of customer analytics to enhance that service experience.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:*

*Career Opportunities:* Graduates with a B.S. in business administration with a concentration in retail management will understand the nuances of product placement, product availability, supply chain management, consumer behavior and sales management. This industry is one of the leading contributors to the economic activity of the United States. Career opportunities exist throughout the supply chain both domestically and internationally in fields such as retail, management, product buying, sales management and store/franchise/district management.

*Contact:*

Morrison School of Management and Agribusiness  
<http://www.poly.asu.edu/msma/>  
morrisonsschool@asu.edu  
PRLTA 330  
480/727-1287

**Computer Information Systems (BS) BACISBS**

W.P. Carey School of Business

*Program Description:* In today's world, it is hard to find a business that is not dependent on computers. Investing in a degree that teaches you about the exciting and innovative ways that information technology is used to help organizations succeed will position you to potentially earn a high starting salary at graduation. Currently there is an acute shortage of information systems professionals, and many more jobs than graduates. With the help of our dedicated faculty, you will learn how to design, build and maintain information systems that support both business operations and managerial decision-making. In particular, you will learn about:

- Business process analysis.
- Project management.
- Evidenced-based decision-making.
- The information value chain.
- Databases and data modeling.
- Application program development.
- Network deployment.
- Systems integration.

This is your opportunity to join a team of motivated students and become part of one of the nation's highest ranked computer information systems departments.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* Freshmen admission requirements: 1160 SAT Reasoning OR 25 ACT score, OR graduated in the top eight percent of high school class.

Freshmen should select an additional major when applying for admission. Additional choices may include any of the W. P. Carey's Business BA programs or

any other business or other degree program outside W. P. Carey School of Business. Students who are not admissible to a W. P. Carey Business BS major and who did not select a second major or are not admissible to their second major choice will be placed in a Business BA program in W. P. Carey School of Business.

Transfer admission requirements (30 or more semester hours of credit after high school): 3.00 transfer GPA AND 1160 SAT score OR 25 ACT score OR graduated in the top eight percent of high school class.

Transfer students should select an additional major when applying for admission. Additional choices may include any of the W. P. Carey's Business BA programs or any other business or other degree program outside W. P. Carey School of Business.

Students with less than 45 transfer hours who are not admissible to a W. P. Carey School of Business major and who did not select a second major or are not admissible to their second major choice will be placed in Exploratory--Social and Behavioral Sciences in University College.

Students with more than 45 transfer hours who are not admissible to University College will be contacted to select an appropriate major.

*Career Opportunities:* A computer information systems degree offers job opportunities in a variety of industries, including entertainment, national defense, transportation, education, healthcare and finance. Information systems are a key component in the success of other functional business areas such as accounting, supply chain, finance and marketing. Entry-level information systems positions include database administrator, systems analyst, network administrator, project manager, systems administrator and consultant. Long-term career aspirations for a student with a computer information systems degree include chief information officer, chief technology officer, chief knowledge officer, chief security officer and chief executive officer.

*Contact:*

Department of Information Systems

<http://wpcarey.asu.edu/is>

wpcareyis@asu.edu

BA 301P

480/965-3252

**Economics (BS) BAECNBS**

W.P. Carey School of Business

*Program Description:* The economics department is committed to providing students a first-class educational experience. Faculty have received numerous teaching awards and their teaching evaluations from students are consistently high. The economics faculty is actively engaged in scholarly research leading to publication in the major economics journals.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* Freshmen admission requirements: 1160 SAT Reasoning OR 25 ACT score, OR graduated in the top eight percent of high school class.

Freshmen should select an additional major when applying for admission. Additional choices may include any of the W. P. Carey's Business BA programs or any other business or other degree program outside W. P. Carey School of Business. Students who are not admissible to a W. P. Carey Business BS major and who did not select a second major or are not admissible to their second major choice will be placed in a Business BA program in W. P. Carey School of Business.

Transfer admission requirements (30 or more semester hours of credit after high school): 3.00 transfer GPA AND 1160 SAT score OR 25 ACT score OR graduated in the top eight percent of high school class.

Transfer students should select an additional major when applying for admission. Additional choices may include any of the W. P. Carey's Business BA programs or any other business or other degree program outside W. P. Carey School of Business.

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Students with more than 45 transfer hours who are not admissible to University College will be contacted to select an appropriate major.

*Career Opportunities:* A major in economics provides students with the analytical and quantitative skills needed to prepare them for careers in business, government or public policy. The program of study can also be tailored to prepare students for graduate programs in economics, business or law. Students interested in pursuing a Ph.D. in economics are strongly encouraged to minor or major in mathematics as well.

Graduates have taken positions:

1. As corporate economists who collect data and make forecasts relevant to the firm's business.
2. As consultants who serve as advisers to state and federal governments as well as private corporations.
3. In banking and financial services firms.

Each year many graduates pursue studies at some of the best graduate schools in the country.

*Contact:*

Department of Economics

<http://wpcarey.asu.edu/ecn>  
wpcareyecn@asu.edu  
BAC 659  
480/965-3531

### **Finance (BS) BAFINBS**

W.P. Carey School of Business

*Program Description:* The finance department has a rich tradition of educating leaders that excel in all aspects of the discipline of finance. Whether ascending to the top ranks of the venture capital industry, executing multimillion-dollar real estate deals, or becoming successful entrepreneurs with ideas and drive that are all their own, our graduates are equipped to succeed.

In particular, our Investment Banking Industry Scholars Program mentors students interested in going to Wall Street. Our student investment management fund provides undergraduates the opportunity to manage a real-world investment portfolio worth hundreds of thousands of dollars.

The faculty is considered among the top finance departments in the world. Our professional advisory board, comprised of leading professionals from the financial services, manufacturing, energy, investment banking and real estate sectors, provides a sounding board for new ideas and a source of jobs for our top graduates.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* Freshmen admission requirements: 1160 SAT Reasoning OR 25 ACT score, OR graduated in the top eight percent of high school class.

Freshmen should select an additional major when applying for admission. Additional choices may include any of the W. P. Carey's Business BA programs or any other business or other degree program outside W. P. Carey School of Business. Students who are not admissible to a W. P. Carey Business BS major and who did not select a second major or are not admissible to their second major choice will be placed in a Business BA program in W. P. Carey School of Business.

Transfer admission requirements (30 or more semester hours of credit after high school): 3.00 transfer GPA AND 1160 SAT score OR 25 ACT score OR graduated in the top eight percent of high school class.

Transfer students should select an additional major when applying for admission. Additional choices may include any of the W. P. Carey's Business BA programs or any other business or other degree program outside W. P. Carey School of Business.

Students with less than 45 transfer hours who are not admissible to a W. P. Carey School of Business major and who did not select a second major or are not admissible to their second major choice will be placed in Exploratory--Social and Behavioral Sciences in University College.

Students with more than 45 transfer hours who are not admissible to University College will be contacted to select an appropriate major.

*Career Opportunities:* Students majoring in finance are prepared for careers in:

- Corporate financial management.
- Investment banking.
- Consulting.
- Depository institutions.
- Portfolio analysis.
- Investment management.
- Financial services.

*Contact:*

Department of Finance  
<http://wpcarey.asu.edu/fin>  
wpcareyfin@asu.edu  
BAC 519  
480/965-3131

### **Management (BS) BAMGTBS**

W.P. Carey School of Business

*Program Description:* The management major aims to prepare students to work effectively in organizations as team members and as managers through acquiring important knowledge and skills such as communication, teamwork, personal ethics and integrity, analytical research and problem-solving, global mindset and leadership.

Students in the major engage with community-based group projects in not-for-profit and for-profit business settings. The curriculum begins with immersion in the fundamentals of the global economy, the world of e-business and collaborative teams. Throughout the program, understanding of theory and concepts of management and ethical leadership are enhanced by experiencing and testing these concepts in skill-based exercises, case discussions and team-based project work in the classroom and in the community.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* Freshmen admission requirements: 1160 SAT Reasoning OR 25 ACT score, OR graduated in the top eight percent of high school class.

Freshmen should select an additional major when applying for admission. Additional choices may include any of the W. P. Carey's Business BA programs or any other business or other degree program outside W. P. Carey School of Business. Students who are not admissible to a W. P. Carey Business BS major and who did not select a second major or are not admissible to their second major choice will be placed in a Business BA program in W. P. Carey School of Business.

Transfer admission requirements (30 or more semester hours of credit after high school): 3.00 transfer GPA AND 1160 SAT score OR 25 ACT score OR graduated in the top eight percent of high school class.

Transfer students should select an additional major when applying for admission. Additional choices may include any of the W. P. Carey's Business BA programs or any other business or other degree program outside W. P. Carey School of Business.

Students with less than 45 transfer hours who are not admissible to a W. P. Carey School of Business major and who did not select a second major or are not admissible to their second major choice will be placed in Exploratory--Social and Behavioral Sciences in University College.

Students with more than 45 transfer hours who are not admissible to University College will be contacted to select an appropriate major.

*Career Opportunities:* The management major prepares graduates for managerial leadership in a world characterized by:

- Corporate accountability.
- Cross-functional management.
- Demands for continuous process improvements to enhance the value chain.
- Ethical decision making.
- Growing technological sophistication.
- Racial, cultural and gender diversity in the workforce.
- The fast pace of e-business.

The need for skills in communicating and working with people, directing projects and managing change.

Graduates with skills in these areas are likely to be recruited by management consulting firms, high-tech firms, service and manufacturing firms, for-profit and not-for-profit organizations, and large and small organizations.

*Contact:*

Department of Management  
<http://wpcarey.asu.edu/mgt>  
wpcareymgt@asu.edu  
BA 323  
480/965-3431

**Management (Entrepreneurship) (BS) BAMGTEBS**

W.P. Carey School of Business

*Program Description:* The entrepreneurship concentration prepares students to identify, evaluate and develop entrepreneurial opportunities, whether in existing companies or in new business ventures. The entrepreneurship concentration is grounded in the management major's emphasis on collaboration, leadership,

communication and team building, but adds refined analytical, managerial and leadership skills appropriate for people who want to change the world through new product development and innovation.

Students in the entrepreneurship concentration frequently collaborate with students from across the university, in particular students in the College of Design and the School of Sustainability. Additionally, the topic of sustainability is strongly emphasized throughout the curriculum. Graduates have the option of starting their own businesses or working for companies that value their entrepreneurial abilities.

*Language Requirement: N | Program Fee: Y*

*Admission Requirements:* Freshmen admission requirements: 1160 SAT Reasoning OR 25 ACT score, OR graduated in the top eight percent of high school class.

Freshmen should select an additional major when applying for admission. Additional choices may include any of the W. P. Carey's Business BA programs or any other business or other degree program outside W. P. Carey School of Business. Students who are not admissible to a W. P. Carey Business BS major and who did not select a second major or are not admissible to their second major choice will be placed in a Business BA program in W. P. Carey School of Business.

Transfer admission requirements (30 or more semester hours of credit after high school): 3.00 transfer GPA AND 1160 SAT score OR 25 ACT score OR graduated in the top eight percent of high school class.

Transfer students should select an additional major when applying for admission. Additional choices may include any of the W. P. Carey's Business BA programs or any other business or other degree program outside W. P. Carey School of Business.

Students with less than 45 transfer hours who are not admissible to a W. P. Carey School of Business major and who did not select a second major or are not admissible to their second major choice will be placed in Exploratory--Social and Behavioral Sciences in University College.

Students with more than 45 transfer hours who are not admissible to University College will be contacted to select an appropriate major.

*Career Opportunities:* The entrepreneurship concentration within the management major prepares students for leadership in a world characterized by rapid new product development, short product life cycles, demands for continuous change and improvement and the need to move quickly to capture value from fleeting opportunities. Embedded within the entrepreneurship concentration is a consistent focus on integrating skill sets from a wide range of business disciplines, as it is requisite of all entrepreneurs to be conversant across an ever-changing landscape of issues. Graduates with these skills are likely to be recruited by smaller and family-owned firms, high-tech firms, for-profit and not-for-profit organizations, as well as

larger organizations with an entrepreneurial bent. Management graduates also often start their own businesses.

*Contact:*

Department of Management  
<http://wpcarey.asu.edu/mgt>  
wpcareymgt@asu.edu  
BA 323  
480/965-3431

**Marketing (BS) BAMKTBS**

W.P. Carey School of Business

*Program Description:* Students majoring in marketing gain an understanding of the science behind consumer behavior and the critical role that marketing plays in all organizations. In addition, they develop marketing skills that provide a competitive advantage in their careers. The nationally ranked and award-winning marketing faculty share a passion for teaching and mentoring undergraduate students. Faculty provide many productive ways for students to get involved in the life of our department and work with our business partners. The department is home to the Center for Services Leadership, the premier international center for the study of the science of services, and offers distinctive course work in professional sales, relationship management and sports business.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* Freshmen admission requirements: 1160 SAT Reasoning OR 25 ACT score, OR graduated in the top eight percent of high school class.

Freshmen should select an additional major when applying for admission. Additional choices may include any of the W. P. Carey's Business BA programs or any other business or other degree program outside W. P. Carey School of Business. Students who are not admissible to a W. P. Carey Business BS major and who did not select a second major or are not admissible to their second major choice will be placed in a Business BA program in W. P. Carey School of Business.

Transfer admission requirements (30 or more semester hours of credit after high school): 3.00 transfer GPA AND 1160 SAT score OR 25 ACT score OR graduated in the top eight percent of high school class.

Transfer students should select an additional major when applying for admission. Additional choices may include any of the W. P. Carey's Business BA programs or any other business or other degree program outside W. P. Carey School of Business.

Students with less than 45 transfer hours who are not admissible to a W. P. Carey School of Business major and who did not select a second major or are not admissible to their second major choice will be placed in Exploratory--Social and Behavioral Sciences in University College.

Students with more than 45 transfer hours who are not admissible to University College will be contacted to select an appropriate major.

*Career Opportunities:* Through the proper selection of course work and other educational experiences, a marketing student may prepare for a variety of careers in areas such as:

- Business development.
- Business-to-business marketing.
- Customer relationship management.
- International marketing.
- Market research and information management.
- Marketing communications.
- Professional sales and relationship management.
- Retail management.
- Sales management.
- Services marketing.

The degree program provides fundamentals, flexibility and specialization opportunities.

*Contact:*

<http://wpcarey.asu.edu/mkt>

wpcareymkt@asu.edu

BAC 460

480/965-3621

### **Real Estate (BS) AGREABS**

W.P. Carey School of Business

*Program Description:* Students in the B.S. in real estate program gain an understanding of both residential and commercial real estate markets. The curriculum combines the study of finance and real estate and focuses on competencies in real estate law, structuring real estate transactions, real estate valuation techniques and an understanding of mortgages and mortgage markets. The program is organized around five aspects of real estate:

1. Brokerage/management.
2. Development.
3. Financing.
4. Investments.
5. Market analysis.

Emphasis is placed on team work and involvement in projects designed to develop analytical, communication and technology skills.

*Language Requirement:* N | *Program Fee:* Y

*Career Opportunities:* Graduates are prepared to pursue careers in land development, investment analysis, appraisal, property management, brokering and mortgage finance. Graduates may also choose to continue their education by enrolling in graduate degree programs or law school.

*Contact:*

Morrison School of Management and Agribusiness  
<http://poly.asu.edu/msma/>  
morrisonsschool@asu.edu  
PRLTA 330  
480/727-1585

**Supply Chain Management (BS) BASCMBS**

W.P. Carey School of Business

*Program Description:* Our program prepares graduates to become excellent supply chain managers by focusing on planning, procurement, negotiations, logistics, execution systems and strategy development. Classes are small and use projects and case studies to bring the material to life.

Our program is consistently ranked as one of the top supply chain programs in the world, providing our students an opportunity to be recruited by many leading international companies. Supply chain management brings us an abundance of affordable, high-quality goods and services. Supply chain managers coordinate the purchase of raw materials, manufacturing and transportation of materials across multiple vendors and multiple countries to provide the services and finished goods sitting on your local store shelf or online retailer. It is a key reason that you can buy an ever-increasing variety of goods and services at remarkably low prices.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* Freshmen admission requirements: 1160 SAT Reasoning OR 25 ACT score, OR graduated in the top eight percent of high school class.

Freshmen should select an additional major when applying for admission. Additional choices may include any of the W. P. Carey's Business BA programs or any other business or other degree program outside W. P. Carey School of Business. Students who are not admissible to a W. P. Carey Business BS major and who did not select a second major or are not admissible to their second major choice will be placed in a Business BA program in W. P. Carey School of Business.

Transfer admission requirements (30 or more semester hours of credit after high school): 3.00 transfer GPA AND 1160 SAT score OR 25 ACT score OR graduated in the top eight percent of high school class.

Transfer students should select an additional major when applying for admission. Additional choices may include any of the W. P. Carey's Business BA programs or any other business or other degree program outside W. P. Carey School of Business.

Students with less than 45 transfer hours who are not admissible to a W. P. Carey School of Business major and who did not select a second major or are not admissible to their second major choice will be placed in Exploratory--Social and Behavioral Sciences in University College.

Students with more than 45 transfer hours who are not admissible to University College will be contacted to select an appropriate major.

*Career Opportunities:* Career track progression can lead to the vice president level in supply-chain-related areas. Firms recruit ASU supply chain management graduates from around the world and in all sectors of the economy, including public and private, manufacturing, service, healthcare and retail. Students from our program are highly sought after, and we have excellent placements. The following are some positions that our graduates have been hired into:

- Planner or analyst.
- Buyer/planner.
- Production scheduler.
- Quality control specialist.
- Internet marketing analyst.
- Supply management analyst.
- Inventory specialist.
- Operations planner/analyst.
- Materials manager.
- Commodity manager.
- Logistics planner.
- Production coordinator.
- Distribution manager.
- Production line manager.
- Product forecaster.

*Contact:*

Department of Supply Chain Management  
<http://wpcarey.asu.edu/scm>  
[wpcarey.scm@asu.edu](mailto:wpcarey.scm@asu.edu)  
BA 446  
480/965-6044

## **Design and the Arts, Herberger Institute for**

### **Architectural Studies (BSD) ARSTDBSD**

Herberger Institute for Design and the Arts

*Program Description:* Architects design buildings and environments that are useful, sustainable and aesthetically pleasing. This implies an understanding of people's needs, of the science and technology of building, and of the concepts of aesthetics. The faculty in the School of Architecture and Landscape Architecture offer a B.S.D. in

architectural studies. In addition to developing knowledge and skills in architectural design, building technology, landscape architecture and professional practice, students are encouraged to select electives from a broad range of approved courses both within the college and across the university. These electives may be selected to devise a minor, to further professional study, or in some other fashion enrich the student's academic experience.

This is an eight semester program requiring sequential completion of studio course work (or its approved equivalent) at any point of entry.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted to the major, but must pass a degree milestone to continue in the major at the end of the first year.

*Career Opportunities:* Graduates of the bachelor's degree program who wish to become licensed can complete their professional studies by attending graduate school and earning the accredited professional master's degree. In Arizona, other graduates work for registered architects for several years before taking their licensing examination. Some begin their careers working for small offices of 10 to 20 people, others work for very large firms, industries, corporations or governmental agencies.

*Contact:*

School of Architecture and Landscape Architecture  
<http://design.asu.edu/sala/index.shtml>  
design.advising@asu.edu  
DS (Design South) 101  
480/965-3536

### **Art (Art Education) (BFA) FAARTEBFA**

Herberger Institute for Design and the Arts

*Program Description:* Art education involves the study of art, policy making in art, how people learn about art, and how instructors or administrators can best facilitate teaching art. The B.F.A. in art with a concentration in art education focuses on:

1. Public and private K-12 instruction.
2. Art in higher education.
3. Educational programs in art museums.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students wishing to pursue art education or a studio art major apply to the ASU Herberger Institute School of Art and enter as art exploratory majors. There is no portfolio review process at the time of admission to ASU for freshmen. Students must complete a series of requirements, including

successfully passing a portfolio review in order to be eligible for upper-division course work in the major. Students wishing to pursue art history, museum studies or art studies are considered for direct admission to the major.

Freshmen students applying to the Herberger Institute for Design and the Arts enter ASU as pre-art majors in the School of Art. There is no portfolio review process at the time of admission to ASU for freshmen.

Typically students in their second year interested in studio art and art education will submit a portfolio for review once they have completed their core requirements and are completing the last of the 12 hours of 200-level art requirements; or if they are interested in art history or museum studies, they must fulfill critical requirements to progress in their major.

Transfer students who have completed the foundational core and pre-art requirements may submit a portfolio for review before they have been admitted to ASU. To complete an undergraduate degree in four years, it is recommended that community college transfer students, who are completing a two year degree and have completed the foundational core and pre-art requirements apply and submit a portfolio in the semester they are completing their community college degree or the semester before they plan to enter Arizona State University. Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Graduates who also complete the state certification requirements for an art specialist certificate can teach in public and private elementary schools, middle schools and high schools. Graduates who do not seek state certification may find opportunities for jobs with art museums and recreational or community service groups that offer art instruction.

*Contact:*

School of Art  
<http://art.asu.edu>  
DS (Design South) 101  
480/965-3468

**Art (Art History) (BA) FAARTHBA**

Herberger Institute for Design and the Arts

*Program Description:* Art history students study the history of the visual arts and the theoretical and critical literature associated with the art of different cultures. The discipline of art history requires the development of critical writing skills, and use of such fields as history, philosophy, religious studies, literature and anthropology. The B.A. in art with a concentration in art history at ASU is one of the most rigorous undergraduate art degree programs in the U.S. Students must take courses in all major historical periods and also work in non-Western art traditions. Students are encouraged to take some course work outside of art history, such as courses in museum studies, gallery exhibitions and studio work.

*Language Requirement:* Y | *Program Fee:* N

*Admission Requirements:* Students meeting the university requirements for admission may matriculate in the Herberger Institute for Design and the Arts. Separate admission procedures and approvals are required for some programs within the college. Students must contact specific departments or schools for details.

Freshmen students applying to the Herberger Institute School of Art enter ASU as art exploratory majors in the School of Art. There is no portfolio review process at the time of admission to ASU for freshmen.

Typically students in their second year interested in studio art and art education will submit a portfolio for review once they have completed their core requirements and are completing the last of the 12 hours of 200-level art requirements; or if they are interested in art history or museum studies, they will submit a declaration form in the semester in which they complete 30 hours.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Graduates in art history at the bachelor's level find employment opportunities in commercial art galleries, entry-level jobs with art publications and in museums. A graduate degree is essential for professional jobs; a master's degree prepares individuals to teach at the community college level or to gain entry into museums, auction houses and publishing companies. The Ph.D. is a necessity for employment as a university or college teacher, and for responsible administrative posts in the museum and publishing world.

*Contact:*

School of Art

<http://art.asu.edu>

DS (Design South) 101

480/965-3468

**Art (Art Studies) (BA) FAARTSTDBA**

Herberger Institute for Design and the Arts

*Program Description:* The art studies curriculum offers students a broad educational foundation in the arts and general studies. The B.A. in art with a concentration in art studies is an interdisciplinary program featuring course work in art history, studio art, performing arts and a range of arts-related courses from throughout the university. This concentration offers students a great deal of flexibility in planning course work. The scope of offerings in art and elsewhere on campus is unparalleled at smaller institutions. An art studies student can assemble an art-related curriculum focused on individual student needs, in consultation with a faculty advisor.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students meeting the university requirements for admission may matriculate in the Herberger Institute for Design and the Arts. Separate admission procedures and approvals are required for some programs within the college. Students must contact specific departments or schools for details.

Freshmen may apply directly to the Art Studies program; there is no portfolio review for this major.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Graduates work in arts-related fields such as arts administration, service-related art fields and galleries. Career opportunities are also available with employers who seek graduates with a well-rounded humanities education.

*Contact:*

School of Art

<http://art.asu.edu>  
DS (Design South) 101  
480/965-3468

### **Art (Ceramics) (BFA) FAARTCBFA**

Herberger Institute for Design and the Arts

*Program Description:* Students in the ceramics program learn the widest possible range of technical skills and aesthetic concerns within the field. They are encouraged to express themselves in any direction their concepts dictate, through the medium of ceramics. The B.F.A. degree program in art with a concentration in ceramics has an extensive guest speaker program of nationally recognized ceramic artists. The University Art Museum contributes further to the student experience through its significant collection of contemporary ceramic art, a large collection of early-American pottery and Southwestern Native American ceramics. Both undergraduate and graduate students exhibit work in local, regional and national juried and invitational exhibitions.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students will be admitted to ASU as art exploratory majors. They must complete a series of requirements including successfully passing a portfolio review in order to be eligible for upper division coursework in the major.

Freshmen students applying to the Herberger Institute School of Art enter ASU as pre-art majors in the School of Art. There is no portfolio review process at the time of admission to ASU for freshmen.

Typically students in their second year interested in studio art and art education will submit a portfolio for review once they have completed their core requirements and are completing the last of the 12 hours of 200-level art requirements; or if they are interested in art history or museum studies, they will submit a declaration form in the semester in which they complete 30 hours.

Transfer students who have completed the foundational core and pre-art requirements may submit a portfolio for review before they have been admitted to ASU. To complete an undergraduate degree in four years, it is recommended that community college transfer students, who are completing a two year degree and have completed the foundational core and pre-art requirements apply and submit a portfolio in the semester they are completing their community college degree or the semester before they plan to enter Arizona State University.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Graduates of the undergraduate and graduate programs work as artists in the field, selling their works through commercial galleries, commissions and to private collectors. Some artists work as designers and consultants to the commercial ceramic industry; others set up their own businesses, producing hand-crafted functional ware, architectural tiles and one-of-a-kind works.

*Contact:*

School of Art

<http://art.asu.edu>

DS (Design South) 101

480/965-3468

**Art (Drawing) (BFA) FAARTDBFA**

Herberger Institute for Design and the Arts

*Program Description:* The students within painting and drawing embrace a wide range of media, including acrylics, charcoal, graphite, oil and watercolor. The diverse faculty allow students to discover and explore a multitude of aesthetic and conceptual approaches in their artistic endeavors.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted to ASU as art exploratory majors. They must complete a series of requirements including successfully passing a portfolio review in order to be eligible for upper-division course work in the major.

Freshmen students applying to the Herberger Institute School of Art enter ASU as pre-art majors in the School of Art. There is no portfolio review process at the time of admission to ASU for freshmen.

Typically students in their second year interested in studio art and art education will submit a portfolio for review once they have completed their core requirements and are completing the last of the 12 hours of 200-level art requirements; or if they are interested in art history or museum studies, they will submit a declaration form in the semester in which they complete 30 hours.

Transfer students who have completed the foundational core and pre-art requirements may submit a portfolio for review before they have been admitted to ASU. To complete an undergraduate degree in four years, it is recommended that community college transfer students, who are completing a two year degree and have completed the foundational core and pre-art requirements apply and submit a

portfolio in the semester they are completing their community college degree or the semester before they plan to enter Arizona State University.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Graduates complete the program with drawing skills that enable them to apply for positions that require knowledge in drawing or two-dimensional conceptual skills. Further education, either formal or informal, is usually necessary to refine their skills in a very competitive marketplace. Many graduates continue their education in an M.F.A. graduate program, which allows them to develop their talent further and to teach. Some take jobs in related fields, such as galleries and museums, allowing them to continue producing their own creative work.

*Contact:*

School of Art

<http://art.asu.edu>

DS (Design South) 101

480/965-3468

### **Art (Fibers) (BFA) FAARTFBFA**

Herberger Institute for Design and the Arts

*Program Description:* Students in the fiber arts curriculum explore nearly every process used for the construction and decoration of fabric. Part of the program covers processes from very basic carding, spinning, dyeing and felting of wool, to the use of the loom and the study of complex weave structures. The B.F.A. in art with a concentration in fibers degree program focuses on the history of fabric, clothing, shelter and on contemporary fiber artists and designers. Part of the uniqueness of this program is the location. The Southwest has a long history of textiles, beautiful museums, and many cultures still practicing their traditional textile methods, as well as contemporary galleries and art centers that combine to make this area a fertile ground for developing artists.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted to ASU as art exploratory majors. They must complete a series of requirements including successfully passing a portfolio review in order to be eligible for upper-division course work in the major.

Freshmen students applying to the Herberger Institute School of Art enter ASU as pre-art majors in the School of Art. There is no portfolio review process at the time of admission to ASU for freshmen.

Typically students in their second year interested in studio art and art education will submit a portfolio for review once they have completed their core requirements and are completing the last of the 12 hours of 200-level art requirements; or if they are interested in art history or museum studies, they will submit a declaration form in the semester in which they complete 30 hours.

Transfer students who have completed the foundational core and pre-art requirements may submit a portfolio for review before they have been admitted to ASU. To complete an undergraduate degree in four years, it is recommended that community college transfer students, who are completing a two year degree and have completed the foundational core and pre-art requirements apply and submit a portfolio in the semester they are completing their community college degree or the semester before they plan to enter Arizona State University.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Graduates with a B.F.A. degree are prepared to establish their own studios and begin making art or design fabrics for use as interior fabrics or as one-of-a-kind garments. Students are also prepared to begin a graduate program. Some undergraduates have gone to New York City to work in the field of designing textiles. Others prefer to focus on their own art for exhibition. Graduates also setup their own studios and design wearable or fabrics for interior use, while others make their living by doing commissioned work for interior spaces.

*Contact:*

School of Art

<http://art.asu.edu>

DS (Design South) 101

480/965-3468

## Art (Intermedia) (BFA) FAARTIBFA

Herberger Institute for Design and the Arts

*Program Description:* Intermedia is a conceptually-driven program with an interdisciplinary approach to art-making. The broad-based intermedia program embraces creative practices including installation, performance, sound, video, animation, composite, Web art and rapid prototyping. Intermedia builds on theories of social art practice and tactical media that carry the aims of social change and democratic engagement in a variety of contexts. Programs unique to the school's intermedia curriculum include digital sculpture, time-based arts, animation and performance. Students work with experimental studio practices, performance and digital media to explore new avenues for self-expression, collaborative practice and community action.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Freshmen students applying to the Herberger Institute School of Art enter ASU as art exploratory majors in the School of Art. There is no portfolio review process at the time of admission to ASU for freshmen.

Typically students in their second year interested in studio art and art education will submit a portfolio for review once they have completed their core requirements and are completing the last of the 12 hours of 200-level art requirements; or if they are interested in art history or museum studies, they will submit a declaration form in the semester in which they complete 30 hours.

Transfer students who have completed the foundational core and pre-art requirements may submit a portfolio for review before they have been admitted to ASU. To complete an undergraduate degree in four years, it is recommended that community college transfer students, who are completing a two year degree and have completed the foundational core and pre-art requirements apply and submit a portfolio in the semester they are completing their community college degree or the semester before they plan to enter Arizona State University.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Career opportunities depend on the emphasis selected. Possibilities include independent artist, media consultant, videography, computer

graphics and animation, museum or gallery installation, teacher, set designer and positions in the music/entertainment industry.

*Contact:*

School of Art

<http://art.asu.edu>

DS (Design South) 101

480/965-3468

**Art (Metals) (BFA) FAARTMBFA**

Herberger Institute for Design and the Arts

*Program Description:* The metals and jewelry program prepares students for a professional career in jewelry arts and related areas. The program emphasizes craft skills, attention to detail, critical thinking and creativity. The program boasts an extraordinarily well-equipped studio with a huge variety of metal-smithing tools. Students explore the close relationship with the school's sculpture and foundry programs, learn important entrepreneurial skills and receive a strong foundation in technical vocabulary and skills for working with metal while being encouraged to experiment with alternative materials and techniques.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted to ASU as art exploratory majors. They must complete a series of requirements including successfully passing a portfolio review in order to be eligible for upper-division course work in the major.

Freshmen students applying to the Herberger Institute School of Art enter ASU as pre-art majors in the School of Art. There is no portfolio review process at the time of admission to ASU for freshmen.

Typically students in their second year interested in studio art and art education will submit a portfolio for review once they have completed their core requirements and are completing the last of the 12 hours of 200-level art requirements; or if they are interested in art history or museum studies, they will submit a declaration form in the semester in which they complete 30 hours.

Transfer students who have completed the foundational core and pre-art requirements may submit a portfolio for review before they have been admitted to ASU. To complete an undergraduate degree in four years, it is recommended that community college transfer students, who are completing a two year degree and have completed the foundational core and pre-art requirements apply and submit a portfolio in the semester they are completing their community college degree or the semester before they plan to enter Arizona State University.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Graduates find opportunities in jewelry firms or work in independent production as one-of-a-kind jewelers in their own businesses. Many students further their opportunities by going on to complete the M.F.A.

*Contact:*

School of Art

<http://art.asu.edu/>

DS (Design South) 101

480/965-3468

**Art (Museum Studies) (BA) FAARTMSBA**

Herberger Institute for Design and the Arts

*Program Description:* Museum studies students explore art history, art museums, art galleries and visual arts organizations. The B.A. in art with a concentration in museum studies undergraduate program at ASU is one of the most rigorous in the U.S. The program develops students knowledgeable in art history, critical writing skills, foreign languages, museums, galleries and visual arts organizations. The curriculum includes art history courses taught by faculty with diverse specialties. Students must take courses in art history, small business, research, galleries and museums. Students must also demonstrate an ability to read at least one foreign language.

*Language Requirement:* Y | *Program Fee:* N

*Admission Requirements:* Students meeting the university requirements for admission may matriculate in the Herberger Institute for Design and the Arts. Separate admission procedures and approvals are required for some programs within the college. Students must contact specific departments or schools for details.

Freshmen students applying to the Herberger Institute School of Art enter ASU as art exploratory majors in the School of Art. There is no portfolio review process at the time of admission to ASU for freshmen.

Typically students in their second year interested in studio art and art education will submit a portfolio for review once they have completed their core requirements and are completing the last of the 12 hours of 200-level art requirements; or if they are interested in art history or museum studies, they will submit a declaration form in the semester in which they complete 30 hours.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Museum studies graduates find employment possibilities in art galleries, art-based organizations and entry-level positions with art publications and museums. A graduate degree is necessary for professional positions. An M.A. prepares individuals to teach at community colleges and to gain entry into museums, auction houses and publishing companies. The Ph.D. is necessary for employment as a faculty member at a university or for administrative posts in museums and higher education.

*Contact:*

School of Art

<http://art.asu.edu/>

DS (Design South) 101

480/965-3468

**Art (Painting) (BFA) FAARTPABFA**

Herberger Institute for Design and the Arts

*Program Description:* The majors within painting and drawing embrace a wide range of media, including acrylics, charcoal, graphite, oil and watercolor. The diverse faculty allow students to discover and explore a multitude of aesthetic and conceptual approaches in their artistic endeavors.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted to ASU as pre-art majors. They must complete a series of requirements including successfully passing a portfolio review in order to be eligible for upper-division course work in the major.

Freshmen students applying to the Herberger Institute School of Art enter ASU as art exploratory majors in the School of Art. There is no portfolio review process at the time of admission to ASU for freshmen.

Typically students in their second year interested in studio art and art education will submit a portfolio for review once they have completed their core requirements and are completing the last of the 12 hours of 200-level art requirements; or if they

are interested in art history or museum studies, they will submit a declaration form in the semester in which they complete 30 hours.

Transfer students who have completed the foundational core and pre-art requirements may submit a portfolio for review before they have been admitted to ASU. To complete an undergraduate degree in four years, it is recommended that community college transfer students, who are completing a two year degree and have completed the foundational core and pre-art requirements apply and submit a portfolio in the semester they are completing their community college degree or the semester before they plan to enter Arizona State University.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Graduates complete the program with the painting skills that enable them to apply for positions that require knowledge in painting or two-dimensional conceptual skills. Further education, either formal or informal, is usually necessary to refine their skills in a very competitive marketplace. Many graduates continue their education in an M.F.A. graduate program, which allows them to develop their talent further and to teach. Some take jobs in related fields, such as galleries and museums, allowing them to continue their own creative work.

*Contact:*

School of Art

<http://art.asu.edu/>

DS (Design South) 101

480/965-3468

### **Art (Photography) (BFA) FAARTPHBFA**

Herberger Institute for Design and the Arts

*Program Description:* The photography program at ASU has earned an international reputation for the quality of its instruction and the broad range of course work offered. Students study the medium of photography as a means toward the creation of art and toward visual literacy. This involves the acquisition of technical skills, the development of a sound theoretical base and an immersion in photography's history. Course work encompasses critiques of creative work, beginning and advanced criticism and theory, practice in gallery management as well as practice in black and white, color, digital, large format, portraiture and 19th-century processes.

*Language Requirement: N | Program Fee: N*

*Admission Requirements:* Students will be admitted to ASU as art exploratory majors. They must complete a series of requirements including successfully passing a portfolio review in order to be eligible for upper-division course work in the major.

Freshmen students applying to the Herberger Institute School of Art enter ASU as pre-art majors in the School of Art. There is no portfolio review process at the time of admission to ASU for freshmen.

Typically students in their second year interested in studio art and art education will submit a portfolio for review once they have completed their core requirements and are completing the last of the 12 hours of 200-level art requirements; or if they are interested in art history or museum studies, they will submit a declaration form in the semester in which they complete 30 hours.

Transfer students who have completed the foundational core and pre-art requirements may submit a portfolio for review before they have been admitted to ASU. To complete an undergraduate degree in four years, it is recommended that community college transfer students, who are completing a two year degree and have completed the foundational core and pre-art requirements apply and submit a portfolio in the semester they are completing their community college degree or the semester before they plan to enter Arizona State University.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* A degree in the arts offers students a pathway to a rich and varied choice of careers. The B.F.A. is essential for advanced study leading to the terminal M.F.A. This advanced degree offers opportunities in university teaching, in history or studio areas, curatorial work in galleries, museums and historical collections and nonprofit arts organization management.

*Contact:*

School of Art

<http://art.asu.edu/>

DS (Design South) 101

480/965-3468

## Art (Printmaking) (BFA) FAARTPMBFA

Herberger Institute for Design and the Arts

*Program Description:* Printmaking uses various graphic techniques to create visual art in printed, multiple form. The B.F.A. in art with a concentration in printmaking degree program is recognized nationally for excellence in its offerings. Many former graduates are working, teaching and producing actively in print studios and collegiate printmaking programs across the country. Processes include intaglio (e.g., etching, engraving, dry point, aquatint), lithography, relief (e.g., woodcut, linoleum cut, letterpress), screen-printing, photomechanical techniques, monoprint, papermaking and book arts media. Printmaking art is usually, but not always, two-dimensional and is often called the democratic art, since with multiple original copies, the artists visual ideas are available to a wider public. The university's research and publication program, the Pyracantha Press, a book arts press, has been highly regarded for years.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted to ASU as art exploratory majors. They must complete a series of requirements including successfully passing a portfolio review in order to be eligible for upper-division course work in the major.

Freshmen students applying to the Herberger Institute School of Art enter ASU as pre-art majors in the School of Art. There is no portfolio review process at the time of admission to ASU for freshmen.

Typically students in their second year interested in studio art and art education will submit a portfolio for review once they have completed their core requirements and are completing the last of the 12 hours of 200-level art requirements; or if they are interested in art history or museum studies, they will submit a declaration form in the semester in which they complete 30 hours.

Transfer students who have completed the foundational core and pre-art requirements may submit a portfolio for review before they have been admitted to ASU. To complete an undergraduate degree in four years, it is recommended that community college transfer students, who are completing a two year degree and have completed the foundational core and pre-art requirements apply and submit a portfolio in the semester they are completing their community college degree or the semester before they plan to enter Arizona State University.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Trained printmakers are working artists, practicing the expression of a personal understanding of their place in the world. They may find employment as artists or printmakers in schools of all levels teaching the execution and appreciation of visual art. They also work in fine art print studios, executing original prints for other artists. Printmaking skills such as screen-printing or photomechanical techniques, acquired for the production of art, also have commercial, nonart applications that may afford skilled employment. Artists with printmaking skills may also work with graphic designs, illustrations and signage or may work in museums, conservation, publishing, galleries and in other art-related activities. Additionally, their art may sell successfully in the open marketplace.

*Contact:*

School of Art

<http://art.asu.edu/>

DS (Design South) 101

480/965-3468

**Art (Sculpture) (BFA) FAARTSBFA**

Herberger Institute for Design and the Arts

*Program Description:* The B.F.A. in art with a concentration in sculpture degree program explores nearly all methods of 3-D expression, including modeling, metal casting, welding, woodworking, plastics, neon fabrication, carving and kinetic sculpture. ASU's sculpture program is one of the few in the country to include neon fabrication from start to finish.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted to ASU as art exploratory majors. They must complete a series of requirements including successfully passing a portfolio review in order to be eligible for upper-division course work in the major.

Freshmen students applying to the Herberger Institute School of Art enter ASU as pre-art majors in the School of Art. There is no portfolio review process at the time of admission to ASU for freshmen.

Typically students in their second year interested in studio art and art education will submit a portfolio for review once they have completed their core requirements and are completing the last of the 12 hours of 200-level art requirements; or if they are interested in art history or museum studies, they will submit a declaration form in the semester in which they complete 30 hours.

Transfer students who have completed the foundational core and pre-art requirements may submit a portfolio for review before they have been admitted to ASU. To complete an undergraduate degree in four years, it is recommended that community college transfer students, who are completing a two year degree and have completed the foundational core and pre-art requirements apply and submit a portfolio in the semester they are completing their community college degree or the semester before they plan to enter Arizona State University.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Graduates are prepared to embark on a lifetime exploration of the many aspects of 3-D art. Positions are available in teaching, the fabrication and design of exhibitions, set design, the motion picture industry, welding and 3-D design. Academic posts and positions with museums generally require advanced degrees. Many students also prefer to establish their own studios after graduation.

*Contact:*

School of Art

<http://art.asu.edu/>

DS (Design South) 101

480/965-3468

### **Arts (BA in the Arts) (BA) FAATSBA**

Herberger Institute for Design and the Arts

*Program Description:* The BA in the Arts is a broad-based liberal arts degree program designed for students who are passionate about the arts but wish to explore alternatives to the Institute's discipline specific degree programs. Students will gain an increased understanding of the theoretical, historical, and cultural forces that shape the arts through an open-ended path for exploration and development of a range of skills that will be valuable for advanced study in multiple disciplines.

The major includes a common core for all students and students choose a focus from: Historical and Theoretical Studies in the Arts, Arts Administration, Digital Culture or an Individualized focus designed by the student and subject to approval by the Herberger Institute's Standards Committee and the Dean's Office.

*Language Requirement: Y | Program Fee: N*

*Career Opportunities:* As the population in the state of Arizona grows, numerous arts organizations are developing to provide cultural and artistic experiences for our residents. These organizations will need and demand individuals with the necessary critical thinking skills who understand the impact the arts have on society and who will be passionate employees committed to the arts. This degree will provide the skill set necessary for careers as arts administrators, arts critics, public art specialists, media arts system developers, media arts educators, media arts authors and publishers, and museum curators and directors.

*Contact:*

Dean, Herberger Institute for Design and the Arts  
<http://herbergercollege.asu.edu/>  
DS (Design South) 101  
480/965-4495

### **Dance (BFA) FADANBFA**

Herberger Institute for Design and the Arts

*Program Description:* The School of Dance provides a dynamic and culturally diverse learning environment where students develop as creative artists, scholars and educators. The B.F.A. in dance degree provides an interdisciplinary curriculum promoting innovative collaborations and a holistic approach to acquiring skills for successful career transitions. Creativity and research, the core program values, are embedded in a broad range of academic experiences emphasizing movement and creative practices, artistic process, leadership and pedagogy. Studies in dance cultures, music, digital media, dance history, philosophy, criticism, movement science, somatics and stage and screen production enhance the rich educational setting.

*Language Requirement: N | Program Fee: N*

*Admission Requirements:* Students are admitted as dance interview majors and must successfully complete an interview before enrolling in major courses. More information on the interview process can be found at <http://dance.asu.edu/undergraduate/interviews.htm>.

Prospective students may attend the Prospective Interview Day in February or the Enrolled Student Interview held at the beginning of each semester.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* A comprehensive academic foundation prepares dance professionals for the 21st century by developing the expertise and broad experience to enable them to initiate artistic projects, perform and choreograph. Other graduates teach and design curriculum, produce dance media for performance or instruction, direct or manage a performing arts company, studio or dance-related organization facilitate community partnerships, conduct research and write scholarly publications or work in technical theatre and dance production.

*Contact:*

School of Dance T  
<http://dance.asu.edu/>  
DS (Design South) 101  
480/965-1891

**Dance (Dance Education) (BFA) FADANE BFA**

Herberger Institute for Design and the Arts

*Program Description:* The B.F.A. in dance with a concentration in dance education prepares students to teach dance in elementary and secondary schools, private studio settings and in other community contexts. Creativity and research, the core program values, are embedded in a broad range of academic experiences emphasizing movement and creative practices, artistic process, leadership and pedagogy. Studies in dance cultures, music, digital media, dance history, philosophy and criticism, movement science, somatics and stage and screen production enhance the rich educational setting. A comprehensive academic foundation prepares students to teach and design curriculum. Students complete the initial teacher certification program in the Mary Lou Fulton Institute and Graduate School of Education to fulfill the degree requirements in the B.F.A. (dance education) and become certified to teach dance (K-12) in Arizona public schools.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted as dance interview majors and must successfully complete an interview before enrolling in major courses. More information on the interview process can be found at <http://dance.asu.edu/undergraduate/interviews.htm>.

Prospective students may attend the Prospective Interview Day in February or the Enrolled Student Interview held at the beginning of each semester.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* The concentration in dance education lays the foundation for a career in teaching in public and private settings. Students earn a state of Arizona teaching certification while pursuing the dance education degree and can expect to find employment in one of many thriving middle school and high school dance programs throughout the state, or in more informal community settings.

*Contact:*

School of Dance T  
<http://dance.asu.edu/>  
DS (Design South) 101  
480/965-1891

### **Design Studies (BA) ARDSNBA**

Herberger Institute for Design and the Arts

*Program Description:* The general B.A. in design studies is a highly flexible program of study, much like a liberal arts degree, where students select design and design-related courses offered in the college and throughout the university. Students acquire a breadth of design knowledge via courses taken from three categories: general design, design history and communication for design. The degree is also offered in two more specific concentrations: design history, with a strong focus of the historical aspects of design as they pertain to the disciplines in the college, and design management, which offers a selection of courses in management and human communication that complement design.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Although a specific career path is not the principal intention of the B.A. in design studies, recent graduates of the program have become involved in sales and marketing in the design sector, or have gone on to graduate studies in architecture and planning. Other possible career paths include journalism and education.

*Contact:*

School of Design Innovation  
<http://design.asu.edu/ba>  
[design.advising@asu.edu](mailto:design.advising@asu.edu)  
DS (DESIGN SOUTH) 101  
480/965-7007

### **Design Studies (Design History) (BA) ARDSNHBA**

Herberger Institute for Design and the Arts

Not accepting applications.

*Program Description:* The B.A. in design studies, with a concentration in design history is a highly flexible program of study. This concentration places a strong focus of the historical aspects of design as they pertain to the disciplines in the college. Students also acquire a breadth of design knowledge via courses taken from three categories: general design, design history and communication for design. The degree is also offered in two other concentrations: a general path, where students select design and design-related courses offered in the college and throughout the university, and design management, which offers a selection of courses in management and human communication that complement design.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Although a specific career path is not the principal intention of the B.A. in design studies, recent graduates of the program have become involved in sales and marketing in the design sector, or have gone on to graduate studies in architecture and planning. Other possible career paths include journalism and education.

*Contact:*

School of Design Innovation  
<http://design.asu.edu/ba>  
design.advising@asu.edu  
DS (DESIGN SOUTH) 101  
480/965-7007

### **Design Studies (Design Management) (BA) ARDSNMBA**

Herberger Institute for Design and the Arts

*Program Description:* The B.A. in design studies, with a concentration in design management is a highly flexible program of study. This concentration offers a selection of courses in management and human communication that complement design. Students also acquire a breadth of design knowledge via courses taken from three categories: general design, design history and communication for design. The degree is also offered in two other concentrations: a general path, where students select design and design-related courses offered in the college and throughout the university, and design history, with a strong focus of the historical aspects of design as they pertain to the disciplines in the college.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Although a specific career path is not the principal intention of the B.A. in design studies, recent graduates of the program have become involved in sales and marketing in the design sector, or have gone on to graduate studies in

architecture and planning. Other possible career paths include journalism and education.

*Contact:*

School of Design Innovation  
<http://design.asu.edu/ba/index.shtml>  
design.advising@asu.edu  
DS (DESIGN SOUTH) 101  
480/965-7007

**Film (Film & Media Production) (BA) FAFLMBA**

Herberger Institute for Design and the Arts

*Program Description:* The School of Theatre and Film offers a B.A. in film with a concentration in film and media production. The concentration provides students with a comprehensive practical knowledge of production, awareness of the impact of media and entertainment on the audience, and an understanding of the role of the artist in society. Students in the film and media production concentration have access to digital cameras, lighting and sound equipment in a new teaching studio. Post-production facilities include multiple computer editing stations. The curriculum's course work in ethics in entertainment and dramatic analysis are two other unique components.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* All successful applicants interested in studying film in the Herberger Institute School of Theatre and Film begin their studies at ASU in the filmmaking practices concentration. All students complete the same 18-hour film core requirements in their first two years of study. There are no additional entrance requirements for the B.A. in film with a filmmaking practices concentration.

Students interested in pursuing the highly-selective studio-based film and media production concentration must achieve a 3.0 GPA or higher in the film core and a cumulative ASU GPA of 2.5 to interview for the concentration. They must also interview and submit a portfolio for review in the semester in which they are completing the core.

*Career Opportunities:* The film and media production concentration provides students with the knowledge and experience to prepare them to enter careers in media and entertainment as screenwriters, directors, cinematographers, editors or producers. The B.A. program is an excellent broad-based foundation for work in the profession or to prepare the student for further training at graduate schools or conservatories.

*Contact:*

School of Theatre and Film  
<http://theatrefilm.asu.edu>  
theatrefilm@asu.edu

GHALL 232  
480/965-5337

### **Film (Filmmaking Practices) (BA) FAFPRBA**

Herberger Institute for Design and the Arts

*Program Description:* The Herberger Institute School of Theatre and Film offers a B.A. in film with a nonstudio-based concentration in filmmaking practices. All successful applicants to the B.A. in film begin their studies at ASU in the filmmaking practices concentration.

Students pursuing the filmmaking practices concentration of the B.A. in film receive grounding in production practice, independent film producing, entertainment ethics and an understanding of the role of the artist in society. Students are encouraged to participate in the production-oriented environment of the Herberger Institute for Design and the Arts. The curriculum's course work in ethics in entertainment and dramatic analysis are two unique components of the program. Students completing the degree will be prepared for entry-level positions in film production, producing and management, or advanced graduate-level education.

The School of Theatre and Film also offers a highly selective studio-based concentration in film and media production.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students interested in pursuing the highly-selective, studio-based film and media production concentration must achieve a 3.00 GPA or higher in the film core and a cumulative ASU GPA of 2.50 to interview for the concentration. They must also interview and submit a portfolio for review in the semester in which they are completing the core.

*Career Opportunities:* The filmmaking practices concentration provides students with the knowledge and experience to prepare them to enter entry level positions in media and entertainment production, producing and film management or to enter advanced graduate-level education.

*Contact:*

School of Theatre and Film  
<http://herbergercollege.asu.edu>  
GHALL 116  
4809654495

### **Graphic Design (BSD) ARGRABSD**

Herberger Institute for Design and the Arts

*Program Description:* Graphic designers are responsible for designing how information is communicated. Forms of communication include print, video, film

and electronic (Web). The faculty in the School of Design Innovation offers the B.S.D. in graphic design.

Graphic designers are concerned with how communication is transferred and received, choosing the appropriate mechanism for distinctness, clarity of information and appearance. This program places an emphasis on strategic communication, developed through a design process that includes research, analysis, conceptualization, planning and realization. The process leads to innovative visual communication design solutions for contemporary design problems that are local to global in scope.

This is an eight-semester program requiring sequential completion of studio course work (or its approved equivalent) at any point of entry.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* Based on a very diversified portfolio upon graduation, students opting for the graphic design profession gain employment in brand and corporate identity, interaction and interface design, broadcast (TV graphics), museum/exhibitions, publication and advertising. Specific examples of graphic designers' work include environmental graphics, annual reports, publications, books, Web pages and multimedia presentations. Students may also pursue graduate studies leading to careers in design education and other fields of professional endeavor in design.

*Contact:*

School of Design Innovation  
<http://design.asu.edu/viscom/index.shtml>  
design.advising@asu.edu  
DS (Design South) 101  
480/965-8947

### **Housing & Community Development (BSD) ARHCDBSD**

Herberger Institute for Design and the Arts

*Program Description:* The B.S.D. in housing and community development provides a professional-level education in residential and community development. Students enrolled in the program receive instruction in the development of a broad range of housing types and community environments. Cross-disciplinary instruction in design, real estate development, business administration and construction management is also emphasized. The program places a high value on innovative housing design, affordability, neighborhood creation and sustainable development.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* The majority of recent graduates have positions in the private, residential and land development industries. Others have chosen career paths with public and nonprofit housing and neighborhood redevelopment agencies.

*Contact:*

School of Architecture and Landscape Architecture <http://design.asu.edu/hud>  
design.advising@asu.edu

CAM

480/965-7007

**Industrial Design (BSD) ARINDBSD**

Herberger Institute for Design and the Arts

*Program Description:* Industrial designers are responsible for the design of products and systems that people use in their work, play and daily lives. The industrial design program at ASU focuses on a new model of interdisciplinary product development called integrated innovation. The primary goal of integrated innovation is to produce design solutions that:

1. Meet user needs in unexpected ways.
2. Create value in the marketplace.
3. Improve society and the environment. This is an eight-semester program requiring sequential completion of studio course work (or its approved equivalent) at any point of entry.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates work for large corporations that have their own industrial design departments, such as automobile companies, computer hardware and/or software companies, consumer product companies and medical equipment companies. Opportunities also exist with consulting firms that design for a variety of different clients.

*Contact:*

School of Design Innovation

<http://design.asu.edu/industrial/index.shtml>

design.advising@asu.edu

DS (DESIGN SOUTH) 101

480/965-1767

**Interior Design (BSD) ARINTBSD**

Herberger Institute for Design and the Arts

*Program Description:* Course work in the B.S.D. in interior design examines the context in which individuals and groups live and work. Interior designers create environments within buildings that meet the physical and psychological needs of individuals and institutions to have useful, rich and rewarding contexts for their lives. Interior design involves the design of space, equipment and furniture. It requires substantial technical and organizational understanding, as well as sensibility to color, shape and form.

This is an eight-semester program requiring sequential completion of studio course work (or its approved equivalent) at any point of entry.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates find employment opportunities with interior design firms or architecture firms specializing in interior design. The scope of work undertaken by interior designers is expanding; career opportunities include historic restoration and working for large corporations or governmental agencies within their interior design and space-management offices.

*Contact:*

School of Design Innovation

<http://design.asu.edu/interior/index.shtml>

[design.advising@asu.edu](mailto:design.advising@asu.edu)

DS (DESIGN SOUTH) 101

480/965-3571

### **Landscape Architecture (BSLA) ARPLABSLA**

Herberger Institute for Design and the Arts

*Program Description:* Landscape architects are involved in the design, planning and management of the land. Landscape architects develop expertise in both the art of design and the environmental sciences. Landscape architecture students learn about:

- Bioengineering.
- Computer methods.
- Landscape construction.
- Planning and zoning law.
- Site planning.
- Urban design.

This is an eight-semester program requiring sequential completion of studio course work (or its approved equivalent) at any point of entry.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates in landscape architecture are able to pursue career opportunities in private landscape architecture companies, government environmental planning and management agencies. Some landscape architects elect to pursue graduate degrees to develop specialty skills and to enhance their opportunities for career advancement.

*Contact:*

School of Architecture and Landscape Architecture

<http://design.asu.edu/sala/index.shtml>

[design.advising@asu.edu](mailto:design.advising@asu.edu)

DS (DESIGN SOUTH) 101  
480/965-3536

### **Music (BA) FAMUSBA**

Herberger Institute for Design and the Arts

*Program Description:* The B.A. in music is a broad cultural degree program with an emphasis on the concepts of music history and theory. These concepts are concerned with the intellectual study of music, its stylistic evolution and its place in the world of its time. This degree may be used as a first step toward a master's or doctoral degree in music history or combined with other degree programs.

*Language Requirement:* Y | *Program Fee:* N

*Admission Requirements:* Students are admitted as music audition majors and must successfully complete an audition before enrolling in major courses.

Students wishing to pursue a major in the School of Music must successfully complete an audition before enrolling in major course work. Audition information can be found on the School of Music Web site at:  
<http://music.asu.edu/students/prospective/undergrad/apply.php>. The Web site details the enrollment and audition process.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Music research, criticism, publishing and concert management are among the career opportunities. Many graduates pursue a master's or a doctorate in music or in another professional field.

*Contact:*

School of Music

<http://music.asu.edu>

[ugradmusicadmissions@asu.edu](mailto:ugradmusicadmissions@asu.edu)

MUSIC E167

480/965-3371

### **Music Education (Choral-General) (BMUS) FAMUSCBMUS**

Herberger Institute for Design and the Arts

*Program Description:* The B.Mus. in music education (choral-general) program is designed for students interested in pursuing careers as teachers of general or choral music in elementary and secondary schools. This program also prepares students for K-12 teaching certification.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted as music audition majors and must successfully complete an audition before enrolling in major courses.

Students wishing to pursue a major in the School of Music must successfully complete an audition before enrolling in major course work. Audition information can be found on the School of Music Web site at :

<http://music.asu.edu/students/prospective/undergrad/apply.php>. The Web site details the enrollment and audition process.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Graduates teach in public school music programs that offer general music, choir, band, orchestra or some combination of musical activities. Graduates also teach privately, perform in community and professional ensembles and work in music-related industries.

*Contact:*

School of Music

<http://music.asu.edu>

[ugradmusicadmissions@asu.edu](mailto:ugradmusicadmissions@asu.edu)

MUSIC E167

480/965-3371

### **Music Education (Instrumental) (BMUS) FAMUSIIBM**

Katherine K. Herberger College of the Arts

*Program Description:* The B.Mus. in music education (instrumental) program is designed for students interested in pursuing careers as teachers of instrumental (band, winds) music in the public schools. The degree program also prepares students for K-12 teaching certification.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted as music audition majors and must successfully complete an audition before enrolling in major courses.

Students wishing to pursue a major in the School of Music must successfully complete an audition before enrolling in major course work. Audition information can be found on the School of Music Web site at : <http://music.asu.edu/students/prospective/undergrad/apply.php>. The Web site details the enrollment and audition process.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Graduates teach in public school music programs that offer general music, choir, band, orchestra or some combination of musical activities. Graduates also teach privately, perform in community and professional ensembles and work in music-related industries.

*Contact:*  
School of Music  
<http://music.asu.edu>  
[ugradmusicadmissions@asu.edu](mailto:ugradmusicadmissions@asu.edu)  
MUSIC E167  
480/965-3371

**Music Education (String) (BMUS) FAMUSISBM**  
Herberger Institute for Design and the Arts

*Program Description:* The B.Mus. in music education (string) program is designed for students interested in pursuing careers as teachers of string and orchestra music in the public schools. The degree program also prepares students for K-12 teaching certification.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted as music audition majors and must successfully complete an audition before enrolling in major courses.

Students wishing to pursue a major in the School of Music must successfully complete an audition before enrolling in major course work. Audition information can be found on the School of Music Web site at:

<http://music.asu.edu/students/prospective/undergrad/apply.php>. The Web site details the enrollment and audition process.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Graduates teach in public school music programs that offer general music, choir, band, orchestra or some combination of musical activities. Graduates also teach privately, perform in community and professional ensembles and work in music-related industries.

*Contact:*

School of Music

<http://music.asu.edu>

[ugradmusicadmissions@asu.edu](mailto:ugradmusicadmissions@asu.edu)

MUSIC E167

480/965-3371

### **Music Therapy (BMUS) FAMUSTHBM**

Herberger Institute for Design and the Arts

*Program Description:* The B.Mus. in music therapy program instructs students in the mental-health/special-education profession that uses carefully planned music activities to achieve desired changes in client behavior and functioning. Music therapy is a profession in which engagement in active music-making helps a client achieve nonmusical, therapeutic goals. Educating the potential music therapist requires both a wide range of skill and the ability to work with people in a therapeutic manner. Music therapy students have many opportunities to develop their clinical skills. Students also study musical improvisation, songwriting, world music and popular music styles.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted as music audition majors and must successfully complete an audition before enrolling in major courses.

Students wishing to pursue a major in the School of Music must successfully complete an audition before enrolling in major course work. Audition information can be found on the School of Music Web site at :

<http://music.asu.edu/students/prospective/undergrad/apply.php>. The Web site details the enrollment and audition process.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Graduates are eligible to register as professional music therapists and can sit for the music therapy certification examination given by the Certification Board for Music Therapy. Jobs are available nationally in hospitals, schools, rehabilitation centers, nursing homes and other healthcare facilities. Career opportunities also include work in mental health, special education, physical rehabilitation and geriatric care. A music therapy career may also provide an opportunity for private practice with flexible hours.

*Contact:*

School of Music

<http://music.asu.edu>

[ugradmusicadmissions@asu.edu](mailto:ugradmusicadmissions@asu.edu)

MUSIC E167

480/965-3371

### **Performance (Collaborative Piano) (BMUS) FAMUSPPBM**

Herberger Institute for Design and the Arts

*Program Description:* The B.Mus. in performance with a concentration in collaborative piano offers private instruction, supervised ensemble work and ample opportunity for extensive performance experience. The program focuses on core repertoire: the English, German and French song literature and selected works from the instrumental, operatic and oratorio repertoire. Collaboration within the School of Music involves working with all performance areas, including duo recitals with instrumental and voice colleagues, performances of great chamber music literature, work as rehearsal and pit pianists for the Lyric Opera Theater and concerts with large ensembles and choirs. Few college music schools or departments offer a degree with a concentration in collaborative piano.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted as music audition majors and must successfully complete an audition before enrolling in major courses.

Students wishing to pursue a major in the School of Music must successfully complete an audition before enrolling in major course work. Audition information can be found on the School of Music Web site at :

<http://music.asu.edu/students/prospective/undergrad/apply.php>. The Web site details the enrollment and audition process.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* A degree in the arts offers students a pathway to a rich and varied choice of careers. Career opportunities include professional performer, collaborative pianist or private studio of piano and/or collaborative piano. College-level teaching does require a graduate degree.

*Contact:*

School of Music

<http://music.asu.edu>

[ugradmusicadmissions@asu.edu](mailto:ugradmusicadmissions@asu.edu)

MUSIC E167

480/965-3371

### **Performance (Guitar) (BMUS) FAMUSPGBM**

Herberger Institute for Design and the Arts

*Program Description:* The B.Mus. program in performance with a concentration in guitar stresses the study of guitar literature and techniques. Goals include enabling students to express themselves musically while emphasizing the skills necessary to pursue a career as a professional musician. The course of study includes extensive performance experiences.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted as music audition majors and must successfully complete an audition before enrolling in major courses.

Students wishing to pursue a major in the School of Music must successfully complete an audition before enrolling in major course work. Audition information can be found on the School of Music Web site at :

<http://music.asu.edu/students/prospective/undergrad/apply.php>. The Web site details the enrollment and audition process.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Career opportunities for graduates with a B.Mus. in performance with a concentration in guitar include, performing as a concert soloist or in chamber music ensembles, artist-in-residence interaction as part of school programs or state or community arts councils, for social functions, providing music for restaurants, clubs, resorts, churches and art galleries, recording and studio work and teaching privately or as part of a college or university program.

*Contact:*

School of Music  
<http://music.asu.edu>  
[ugradmusicadmissions@asu.edu](mailto:ugradmusicadmissions@asu.edu)  
MUSIC E167  
480/965-3371

**Performance (Jazz) (BMUS) FAMUSPJBM**

Katherine K. Herberger College of the Arts

*Program Description:* The jazz concentration, under the B.Mus. in performance, places an emphasis on the improvisational aspects of jazz. The curriculum combines jazz performance, composition and pedagogy in a program that allows the student to express themselves musically while emphasizing the skills necessary to pursue a career as a professional musician. The study of jazz performance can be a suitable background for work in performance, recording studios, film scoring, writing and arranging, contemporary composition, jazz pedagogy and other related fields in the music industry.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted as music audition majors and must successfully complete an audition before enrolling in major courses.

Students wishing to pursue a major in the School of Music must successfully complete an audition before enrolling in major course work. Audition information

can be found on the School of Music Web site at :  
<http://music.asu.edu/students/prospective/undergrad/apply.php>. The Web site details the enrollment and audition process.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* Graduates are prepared to work in various professional capacities, including studio musician, jazz composer/arranger, freelance musician, accompanist, film scorer, professional recording artist and teacher.

*Contact:*

School of Music  
<http://music.asu.edu>  
[ugradmusicadmissions@asu.edu](mailto:ugradmusicadmissions@asu.edu)  
MUSIC E167  
480/965-3371

### **Performance (Keyboard) (BMUS) FAMUSPKBM**

Herberger Institute for Design and the Arts

*Program Description:* The B.Mus. in performance with a concentration in keyboard stresses the study of literature and techniques of the piano, organ or harpsichord. Students also study music theory and take other courses required of all music majors. The course of study includes extensive performance experience.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted as music audition majors and must successfully complete an audition before enrolling in major courses.

Students wishing to pursue a major in the School of Music must successfully complete an audition before enrolling in major course work. Audition information can be found on the School of Music Web site at :  
<http://music.asu.edu/students/prospective/undergrad/apply.php>. The Web site details the enrollment and audition process.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* A degree in the arts offers students a pathway to a rich and varied choice of careers. This particular degree program is intended for individuals planning a career as a professional performer and/or private studio or college teacher of piano, harpsichord and/or organ.

*Contact:*

School of Music

<http://music.asu.edu>

[ugradmusicadmissions@asu.edu](mailto:ugradmusicadmissions@asu.edu)

MUSIC E167

480/965-3371

**Performance (Music Theatre) (BMUS) FAMUSPMBM**

Herberger Institute for Design and the Arts

*Program Description:* The B.Mus in performance with a concentration in music theatre features workshops in music theatre performance techniques, and performances in various kinds of musical theatre. Students perform in up to five full productions every year, including every kind of music theatre. The program includes classes in techniques and skills specifically appropriate for music theatre, so students are not dependent upon classes in music and theatre as separate entities. The general education requirements include courses in dance and acting.

*Language Requirement:* Y | *Program Fee:* N

*Admission Requirements:* Students are admitted as music audition majors and must successfully complete an audition before enrolling in major courses.

Students wishing to pursue a major in the School of Music must successfully complete an audition before enrolling in major course work. Audition information can be found on the School of Music Web site at :

<http://music.asu.edu/students/prospective/undergrad/apply.php>. The Web site details the enrollment and audition process.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and

2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* This degree is designed for individuals who plan a career as a performing singer-actor/actress in opera, operetta, musicals and other forms of musical theatre. Graduates find work as conductors, teachers, singers and as actors/actresses. Graduates perform on Broadway, in national touring companies, in major opera houses, or at universities, colleges and schools.

*Contact:*

School of Music

<http://music.asu.edu>

[ugradmusicadmissions@asu.edu](mailto:ugradmusicadmissions@asu.edu)

MUSIC E167

480/965-3371

**Performance (Orchestral Instrument) (BMUS) FAMUSPOBM**

Herberger Institute for Design and the Arts

*Program Description:* The B.Mus. in performance (orchestral instrument) stresses the study of specific orchestral instrument literature and techniques. Goals include enabling students to express themselves musically while emphasizing the skills necessary to pursue a career as a professional musician. Students complete course work that is required of all music majors.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted as music audition majors and must successfully complete an audition before enrolling in major courses.

Students wishing to pursue a major in the School of Music must successfully complete an audition before enrolling in major course work. Audition information can be found on the School of Music Web site at :

<http://music.asu.edu/students/prospective/undergrad/apply.php>. The Web site details the enrollment and audition process.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* A degree in the arts offers students a pathway to a rich and varied choice of careers. Specific opportunities available to graduates of this degree program include performance in professional ensembles, as a concert soloist and teaching privately.

*Contact:*

School of Music

<http://music.asu.edu>

[ugradmusicadmissions@asu.edu](mailto:ugradmusicadmissions@asu.edu)

MUSIC E167

480/965-3371

**Performance (Voice) (BMUS) FAMUSPVB**

Herberger Institute for Design and the Arts

*Program Description:* The B.Mus. in performance with a concentration in voice stresses the study of specific orchestral instrument literature and techniques. Goals include enabling students to express themselves musically while emphasizing the skills necessary to pursue a career as a professional musician. The course of study includes extensive performance experience.

*Language Requirement: Y | Program Fee: N*

*Admission Requirements:* Students are admitted as music audition majors and must successfully complete an audition before enrolling in major courses.

Students wishing to pursue a major in the School of Music must successfully complete an audition before enrolling in major course work. Audition information can be found on the School of Music Web site at :

<http://music.asu.edu/students/prospective/undergrad/apply.php>. The Web site details the enrollment and audition process.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* A degree in the arts offers students a pathway to a rich and varied choice of careers. Career opportunities for B.Mus. in performance graduates include professional performance in opera, oratorio, art song recitals, various chamber ensembles, including early music groups and/or teaching studio voice and related courses.

*Contact:*

School of Music

<http://music.asu.edu>

[ugradmusicadmissions@asu.edu](mailto:ugradmusicadmissions@asu.edu)

MUSIC E167

480/965-3371

### **Theatre (BA) FATHEBA**

Herberger Institute for Design and the Arts

*Program Description:* The B.A. in theatre involves comprehensive academic and hands-on theatre study. Student artists and scholars gain a general appreciation of the principal fields of human knowledge while acquiring training in such areas as theatre and performance studies, performance and directing, design and production, new work development, theatre for youth and film. Concentrations in acting or design and production are available for students who qualify for admission into these programs. ASU offers well-equipped theatre facilities including the Galvin Playhouse, the Lyceum Theatre, the Prism Theatre for student-produced works, extensive shops and uniquely equipped rehearsal and instructional spaces. The School of Theatre and Film production program emphasizes new work and innovative interpretations.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students, both freshmen and transfers, are admitted to ASU as theatre exploratory majors. They successfully complete an interview and audition or portfolio review before enrolling as a BA Theatre major. Students may interview before enrolling at ASU or participate in the interview during their first semester of study. Students who enter before interviewing take course work in the first semester to better prepare them for the interview.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* The B.A. in theatre program provides an excellent broad-based foundation for work in the arts or entertainment professions or readies students for further training at graduate schools or conservatories. The program's liberal arts emphasis prepares graduates for a variety of occupations in both theatre and non-theatre fields. Opportunities may include work with production companies in theatre, television or film, in schools, themed entertainment or arts entrepreneurship.

*Contact:*

School of Theatre and Film  
<http://theatrefilm.asu.edu/>  
theatre@asu.edu  
GHALL 232  
480/965-5337

**Theatre (Acting) (BA) FATHEABA**

Herberger Institute for Design and the Arts

*Program Description:* The B.A. in theatre with a concentration in acting involves comprehensive academic and hands-on theatre study with an emphasis on performance. Student artists and scholars gain a general appreciation of the principal fields of human knowledge while acquiring training in such areas as theatre and performance studies, performance and directing, design and production, new work development, theatre for youth and film. ASU offers well-equipped theatre facilities including the Galvin Playhouse, the Lyceum Theatre, the Prism Theatre for student-produced work, extensive shops and uniquely equipped rehearsal and instructional spaces.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted to ASU as theatre exploratory majors. They successfully complete an interview and audition or portfolio review before enrolling as a B.A. Theatre major. Students may interview before enrolling at ASU or participate in the interview during their first semester of study. Students who enter before interviewing take course work in the first semester to better prepare for the interview. After students are admitted to the B.A. Theatre major, they may interview for admission into the acting concentration; these interviews are conducted in the spring semester. Sophomore standing is required for admission to the acting concentration.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* The B.A. in theatre program provides an excellent broad-based foundation for work in the profession or readies students for further training at graduate schools or conservatories. The program's liberal arts emphasis prepares graduates for a variety of occupations. The concentration in acting offers students advanced study that can lead to careers in theatre, film or media, ranging from regional/seasonal theatrical production opportunities to work in television and film, as well as careers in education and other related arts disciplines.

*Contact:*

School of Theatre and Film  
<http://theatrefilm.asu.edu/>  
theatre@asu.edu  
GHALL 232  
480/965-5337

**Theatre (Design & Production) (BA) FADSNPRBA**

Herberger Institute for Design and the Arts

*Program Description:* The B.A. in theatre with a concentration in design and production involves comprehensive academic and hands-on theatre study with an emphasis on design and production. Student artists and scholars gain a general appreciation of the principal fields of human knowledge while acquiring training in such areas as theatre and performance studies, performance and directing, design and production, new work development, theatre for youth and film. ASU offers well-equipped theatrical facilities including the Galvin Playhouse, the Lyceum Theatre, the Prism Theatre for student-produced work, extensive and professionally staffed production shops and uniquely equipped rehearsal and instructional spaces.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted to ASU as theatre exploratory majors. They successfully complete an interview and audition or portfolio review before enrolling as a BA Theatre major. Students may interview before enrolling at ASU or participate in the interview during their first semester of study. Students who enter before interviewing take course work in the first semester to better prepare for the interview. Interviews for admission into the BA Theatre design and production concentration are conducted each semester and require a portfolio.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and

2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* The B.A. in theatre program provides an excellent broad-based foundation for work in the profession or readies students for further training at graduate schools or conservatories. The program's liberal arts emphasis prepares graduates for a variety of occupations. The design and production concentration offers students advanced study that can lead to careers in the performing arts and the entertainment industry as designers or technologists.

*Contact:*

School of Theatre and Film  
<http://theatrefilm.asu.edu/>  
theatre@asu.edu  
GHALL 232  
480/965-5337

**Theory & Composition (Composition) (BMUS) FAMUSTCBM**

Herberger Institute for Design and the Arts

*Program Description:* The B.Mus. in theory and composition (with a concentration in composition) program focuses on the study of music from a compositional viewpoint. This program may be used as the first step toward a master's or doctoral degree in music theory and composition. The School of Music offers students the opportunity to study with theorists and composers who have established national and international reputations.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted to the school as music audition majors. Admission into the Music Theory and Composition degree program is subject to a successful audition in the major performing medium. An interview with composition faculty member(s) and an evaluation of original compositions is also required.

Students wishing to pursue a major in the School of Music must successfully complete an audition before enrolling in major course work. Audition information can be found on the School of Music Web site at :  
<http://music.asu.edu/students/prospective/undergrad/apply.php>. The Web site details the enrollment and audition process.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* A degree in the arts offers students a pathway to a rich and varied choice of careers. This particular degree program is designed for a student who plans a career as a professional composer, arranger or college-level teacher of theory and composition. College-level teaching does require a graduate degree, however.

*Contact:*

School of Music

<http://music.asu.edu>

[ugradmusicadmissions@asu.edu](mailto:ugradmusicadmissions@asu.edu)

MUSIC E167

480/965-3371

### **Theory & Composition (Theory) (BMUS) FAMUSTTBM**

Herberger Institute for Design and the Arts

*Program Description:* The B.Mus. in theory and composition (with a concentration in theory) program focuses on the theoretical study of music. This program may be used as the first step toward a master's or doctoral degree in music theory and composition. The School of Music offers students the opportunity to study with theorists and composers who have established national and international reputations.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students meeting the university requirements for admission may matriculate in the Herberger Institute for Design and the Arts. Separate admission procedures and approvals are required for some programs within the college. Students must contact specific departments or schools for details.

Students wishing to pursue a major in the School of Music must successfully complete an audition before enrolling in major course work. Audition information can be found on the School of Music Web site at :

<http://music.asu.edu/students/prospective/undergrad/apply.php>. The Web site details the enrollment and audition process.

Direct transfer of courses from other accredited institutions to the Herberger Institute for Design and the Arts are subject to:

1. the existence of parallel and equal courses in the college's curriculum, and
2. departmental or school evaluation of studio courses with respect to performance standards.

Every candidate for the bachelor's degree must earn a minimum of 30 semester hours in resident credit at ASU. Transfer students enrolled in the college must complete a minimum of 15 semester hours of resident credit in the major as approved by the faculty.

*Career Opportunities:* A degree in the arts offers students a pathway to a rich and varied choice of careers. This particular degree program is designed for a student who plans a career as a professional composer, arranger or college-level teacher of theory and composition. College-level teaching does require a graduate degree.

*Contact:*

School of Music

<http://music.asu.edu>

[ugradmusicadmissions@asu.edu](mailto:ugradmusicadmissions@asu.edu)

MUSIC E167

480/965-3371

## Engineering, Ira A. Fulton School of

### Aerospace Engineering (Aeronautics) (BSE) ESAEROBSE

Ira A. Fulton School of Engineering

*Program Description:* The aerospace engineering curriculum provides students with an education in technological areas critical to the design and development of aerospace vehicles and systems. The aeronautics concentration, under the B.S.E. in aerospace engineering, emphasizes aeronautical engineering. Topics in required courses cover aerodynamics, aerospace materials, aircraft structures, propulsion, flight mechanics, and stability and control. Required astronautics topics include orbital mechanics, attitude control and rocket propulsion.

The aerospace engineering programs at ASU are accredited by the Engineering Accreditation Commission of ABET.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown

below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

**Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

**Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, and
2. No high school math or science competency deficiencies (if Undergraduate Admissions requires submission of a high school transcript).

*Career Opportunities:* A majority of students entering the field of aerospace engineering desire to work on the design and analysis of aerospace vehicles. Most graduates are employed in the aerospace industry or in government positions related to aerospace. Specific careers in aerospace engineering include vehicle design and performance, vehicle and component analysis using computer-aided tools, wind-tunnel and flight testing, space mission design and analysis, propulsion engineering, aeronautical and space systems integration, material and structural design and configuration development.

The objectives of the aerospace engineering program are for graduates to be employed in aerospace engineering or a related field or accepted to graduate school and:

1. Graduates will have the technical skills for career success, including the ability to think in a critical and evaluative manner and to consider a broad perspective in order to solve technical and non-technical problems.
2. Graduates will have the professional skills for career success, including an awareness of ethical responsibility, the ability to communicate well and to work successfully within diverse groups.

*Contact:*

Mechanical and Aerospace Engineering Program

<http://mae.fulton.asu.edu>

mae@asu.edu

ECG 346

480/965-3291

**Aerospace Engineering (Astronautics) (BSE) ESAEASBSE**

Ira A. Fulton School of Engineering

*Program Description:* The aerospace engineering curriculum provides students with an education in technological areas critical to the design and development of aerospace vehicles and systems. The astronautics concentration, under the B.S.E. in aerospace engineering, is offered in partnership with the School of Earth and Space Exploration.

The curriculum covers orbital mechanics, space environment, attitude determination and control, telecommunications, space structures, rocket propulsion, and gas dynamics, as well as elective topics in aeronautics. Students in the astronautics concentration study alongside students majoring in exploration science, and design projects are carried out within transdisciplinary student teams.

The aerospace engineering programs at ASU are accredited by the Engineering Accreditation Commission of ABET.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

**Freshman Admission:**☒

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**☒
2. No high school math or science competency deficiencies.

**Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if Undergraduate Admissions requires submission of a high school transcript).

*Career Opportunities:* A majority of students entering the field of aerospace engineering desire to work on the design and analysis of aerospace vehicles. Most graduates are employed in the aerospace industry or in government positions related to aerospace. Specific careers in aerospace engineering include vehicle design and performance, vehicle and component analysis using computer-aided tools, wind-tunnel and flight testing, space mission design and analysis, propulsion engineering, aeronautical and space systems integration, material and structural design, and configuration development.

The objectives of the aerospace engineering program are for graduates to be employed in aerospace engineering or a related field or accepted to graduate school and:

1. Graduates will have the technical skills for career success, including the ability to think in a critical and evaluative manner and to consider a broad perspective in order to solve technical and non-technical problems.
2. Graduates will have the professional skills for career success, including an awareness of ethical responsibility, the ability to communicate well and to work successfully within diverse groups.

*Contact:*

Mechanical and Aerospace Engineering Program  
<http://mae.fulton.asu.edu>  
[mae@asu.edu](mailto:mae@asu.edu)  
ECG 346  
480/965-3291

**Bioengineering (BSE) ESBMEBSE**

Ira A. Fulton School of Engineering

*Program Description:* Bioengineering uses principles and methods from engineering and the physical sciences to solve problems in biology and medicine. A B.S.E. in bioengineering provides students with a broad-based education in engineering and the life and natural sciences, preparing them to apply their skills in an ethical,

sustainable and environmentally responsible manner to make contributions that address societal and individual needs.

The objective of the bioengineering program is to prepare students:

- For productive employment, graduate study, or professional programs, especially in human and animal medicine, biotechnology and related biology-based engineering fields.
- Who will ethically and responsibly contribute to society, drawing from an integrated, multidisciplinary bioengineering education, focusing on sustainability and environmentalism.
- Who continue to develop technical knowledge, awareness and leadership abilities to address domestic or global issues in human health.

*Language Requirement: N | Program Fee: Y*

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

**Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

**Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if Undergraduate Admissions requires submission of a high school transcript).

*Career Opportunities:* Biomedical engineers are employed in industry, hospitals and research facilities affiliated with educational and medical institutions, education and governmental regulatory agencies. They often serve a coordinating or interfacing function, using their background in both the engineering and medical fields. In industry, they may create designs where an in-depth understanding of living systems and technology is essential. They may be involved in performance testing of new or proposed products. Government positions often involve product testing and safety, as well as establishing safety standards for devices. In the hospital, the biomedical engineer may provide advice on the selection and use of medical equipment and supervise performance testing and maintenance of the selected equipment. Biomedical engineers may also build customized devices for special health care or research needs.

*Contact:*

Harrington Bioengineering Program  
<http://hdbe.fulton.asu.edu>  
hdbe@asu.edu  
ECG 334  
480/965-3028

**Biomedical Informatics (BS) ESBMIBS**

Not accepting applications.

*Program Description:* Biomedical informatics is the field in which computer science, information technology, probabilistic reasoning, cognitive science and other quantitative and technical methods and skills are applied to biomedicine and healthcare delivery. The program will educate undergraduate students in the informatics knowledge and skills that will enable them to be effective contributors to the informatics aspects of biomedical sciences, technology development and healthcare delivery. Students will also be prepared to enter graduate programs in biomedical informatics to equip them to assume leadership positions in these fields.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown

below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

**Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class. **and**
2. No high school math or science competency deficiencies.

**Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours. **and**
2. No high school math or science competency deficiencies. **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if Undergraduate Admissions requires submission of a high school transcript).

*Career Opportunities:* Graduates will be uniquely positioned to meet the industry demand for professionals conversant with both the technological and medical knowledge required to successfully implement and maintain information technology in large healthcare systems, hospitals and clinical settings.

With the continued growth of the bioinformatics industry, as genetic sequencing becomes increasingly affordable, new industries based on biomarkers, targeted therapies and risk prediction arise. As such, further opportunities will be available to our graduates as research analysts and entrepreneurs in these fields. Graduates will possess the requisite skills in software engineering, in addition to a strong biological background.

Finally, graduates will be prepared to continue on to graduate studies in biomedical informatics and pursue careers either as researchers in academia or industry, or as mid-level and upper-level management within the healthcare sector.

*Contact:*

Department of Biomedical Informatics Program  
<http://bmi.asu.edu/index.php>  
[sci.advising@asu.edu](mailto:sci.advising@asu.edu)

ABC1  
480/965-3190

### Chemical Engineering (BSE) ESCHEBSE

Ira A. Fulton School of Engineering

*Program Description:* Chemical engineering deals with the application of chemistry, physics and mathematics to the process of converting raw materials or chemicals into more useful or valuable forms. Chemical engineering also involves the design of valuable new materials and chemical products.

The B.S.E. offered in the chemical engineering program builds on a broad base of knowledge within the basic and mathematical sciences, and engineering, and offers excellent career opportunities. Chemical engineers are engaged in the development and production of a diverse range of products including high performance materials needed for aerospace, automotive, biomedical, electronic, environmental and military applications. The modern discipline of chemical engineering is intertwined with biology and biomedical engineering.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

#### **Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

#### **Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**

3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* Chemical engineers have traditionally played a key role in industries as varied as petroleum, food, artificial fibers, petrochemicals, plastics, ceramics, primary metals, glass and specialty chemicals. Newer areas, such as semiconductors, biotechnology, biomedical engineering, modern materials (composites, superconductors) and the solution of environmental problems, have also generated more opportunities for chemical engineers. These factors, along with the recent recovery and reported record earnings of the chemical and petroleum industries, have created a great demand for chemical engineering graduates.

*Contact:*

Chemical Engineering Program  
<http://che.fulton.asu.edu>  
[che@asu.edu](mailto:che@asu.edu)  
ECG 202  
480/965-3313

**Civil Engineering (BSE) ESCEEBSE**

Ira A. Fulton School of Engineering

*Program Description:* Civil engineering involves the analysis, planning, design, construction and maintenance of many types of facilities for government, commerce, industry and the public domain. These include office towers, factories, schools, roadway systems, bridges, airports, tunnels and subway systems, dams, canals and water purification facilities.

The faculty in the Ira A. Fulton School of Engineering offer a B.S.E. in civil engineering. Civil engineers are concerned with the impact their projects have on the public and the environment; they coordinate the needs of society with technical and economic feasibility.

The curriculum exposes students to various areas of civil engineering, including construction engineering, environmental engineering, geotechnical engineering, structures, transportation and water resources.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements.

Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

**Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

**Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* ASU graduates with a B.S.E. in civil engineering readily find employment. Civil engineers work in many different types of companies, from large corporations to small, private consulting firms, or in governmental agencies. A civil engineering background is an excellent foundation for jobs in management and public service. Civil engineering is one of the best engineering professions from the viewpoint of international travel opportunities or for eventually establishing one's own consulting business. The B.S.E. in civil engineering prepares graduates for the Fundamentals of Engineering (FE) examination, the Principles and Practice of Engineering (PE) examination and graduate degrees.

*Contact:*

Civil, Environmental and Sustainable Eng Program  
<http://cee.fulton.asu.edu/>  
cee@asu.edu

ECG 252  
480/965-3589

### Civil Engineering (Construction Engineering) (BSE) ESCEECBSE

Ira A. Fulton School of Engineering

*Program Description:* Civil engineering is primarily concerned with the public domain. Faculty in the Ira A. Fulton School of Engineering offer a B.S.E. in civil engineering, with a concentration in construction engineering. The emphasis in construction involves design, construction techniques, maintenance and operation of many types of facilities for government, commerce and industry. These include office towers, factories, schools, roadway systems, bridges, airports, tunnels and subway systems, dams, canals and environmental protection facilities, such as solid waste and water treatment systems. In addition to construction engineering, the curriculum exposes students to other areas of civil engineering, including structures, geotechnical engineering, transportation, environmental engineering and water resources.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

#### **Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

#### **Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**

3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* ASU graduates with a B.S.E. in civil engineering with a concentration in construction engineering find employment in consulting firms, design and build firms, municipalities, regulatory agencies and state agencies. A civil engineering background is an excellent foundation for jobs in management and public service.

International opportunities are abundant and are likely to expand. The B.S.E. in civil engineering prepares graduates for the Fundamentals of Engineering (FE) examination, the Principles and Practice of Engineering (PE) examination and graduate degrees.

*Contact:*

Civil, Environmental and Sustainable Eng Program

<http://cee.fulton.asu.edu>

cee@asu.edu

ECG 252

480/965-3589

**Civil Engineering (Environmental Engineering) (BSE) ESCEEBSE**

Ira A. Fulton School of Engineering

*Program Description:* Environmental engineering is a multidisciplinary field based on traditional civil engineering principles, chemistry, biology and geology.

Environmental engineers are involved with the design and operation of water and wastewater treatment systems, remediation of contaminated soils and waters, construction of hazardous waste containment systems, analysis of the fate and transport of pollutants in natural environments, water conservation and reuse, air pollution technology and surface water quality management. In addition to environmental engineering, the curriculum exposes students to other areas of civil engineering, including water resources, structures, geotechnical engineering and transportation.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do

not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

**Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

**Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* ASU graduates with a B.S.E. in civil engineering with a concentration in environmental engineering find employment in consulting firms, municipalities, regulatory agencies and industry. The growth of environmental engineering positions has been balanced by the growing number of students entering the field, resulting in a stable job market.

A civil engineering background is an excellent foundation for jobs in management and public service. International opportunities are abundant and are likely to expand. The B.S.E. in civil engineering prepares graduates for the Fundamentals of Engineering (FE) examination, the Principles and Practice of Engineering (PE) examination and graduate degrees.

*Contact:*

Civil, Environmental and Sustainable Eng Program  
<http://cee.fulton.asu.edu>  
[cee@asu.edu](mailto:cee@asu.edu)

ECG 252  
480/965-3589

### Computer Science (BS) ESCSEBS

Ira A. Fulton School of Engineering

*Program Description:* The discipline of computer science is concerned with the design of computers, computational processes and information transfer and transformation. Examples of projects a computer scientist might work on include: design of next-generation computer systems, computer networking, biomedical information systems, gaming systems, search engines, Web browsers and computerized package distribution systems.

Computer scientists might also focus on improving software reliability, network security or information retrieval systems, or may even work as a consultant to a financial services company. Students pursuing this degree may choose to concentrate their studies in software engineering or information assurance.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

#### **Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

#### **Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**

3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* Graduates with a degree in computer science find employment working in a variety of capacities ranging from computer and software design to development of information technologies. Their jobs are often distinguished by the high level of theoretical expertise they apply to solving complex problems and the creation and application of new technologies. Some computer science-related jobs may include creating video games, designing artificial intelligence systems, developing network security applications and inventing and implementing more efficient systems for managing data including information on the Internet.

*Contact:*

Computer Science and Engineering Program

<http://sci.asu.edu/>

[sci.advising@asu.edu](mailto:sci.advising@asu.edu)

BYENG 553

480/965-3190

**Computer Systems Engineering (BSE) ESCSEBSE**

Ira A. Fulton School of Engineering

*Program Description:* The computer systems engineering program is concerned with the analysis, design and evaluation of computer systems, both hardware and software. The program emphasizes computer organization and architecture, digital hardware design, operating systems and systems programming.

Computer engineers often find themselves focusing on problems or challenges that result in new state-of-the-art products that integrate computer capabilities. They work on the manufacturing of computer hardware, from chips to device controllers, including computer networks for the transmission of data and multimedia, design, development, planning, supervision of manufacturing of computer hardware and testing. Computer engineers also focus on the interface between different pieces of hardware and strive to provide new capabilities to existing and new systems or products.

The work of a computer engineer is grounded in hardware, from circuits to architecture, and also focuses on operating systems and software. Computer engineers must understand computer architecture, computer interfacing, logic design, microprocessor system design, system requirements and design.

*Language Requirement: N | Program Fee: Y*

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

**Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

**Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* Computer systems engineers are employed in industry, government, education and consulting and are concerned with the design, selection and installation of hardware and software components of a computer system.

Computer engineers often find themselves focusing on problems or challenges that result in new state-of-the-art products that integrate computer capabilities. They work on the manufacturing of computer hardware, from chips to device controllers, including computer networks for the transmission of data and multimedia, design, development, planning, supervision of manufacturing of computer hardware and testing.

Computer engineers frequently find jobs that involve designing new applications of computers and other devices, such as those used in airplanes, digital television and photography, intelligent highways and control systems for cars, new apparatuses for the sight-impaired or others with physical disabilities, new cell phone technologies, security systems and space vehicles.

*Contact:*

Computer Science and Engineering Program

<http://sci.asu.edu>

[sci.advising@asu.edu](mailto:sci.advising@asu.edu)

BYENG 553

480/965-3190

### **Construction (Concrete Industry Management) (BS) ESCONIMBS**

Ira A. Fulton School of Engineering

*Program Description:* The Del E. Webb School of Construction offers the B.S. in construction with a concentration in concrete industry management. Concrete industry management graduates are broadly educated, articulate managers grounded in basic construction management, who are knowledgeable about concrete technology and techniques and are able to manage people and systems and to promote products or services in the concrete industry.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

#### **Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

#### **Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* The concrete industry management concentration provides a foundation for students who wish to pursue careers as project managers, estimators, schedulers or a combination of all three at an executive level. Concrete industry management career opportunities include:

- Field sales.
- Operations.
- Project and production management.
- Technical service.
- Concrete production.
- Cement.
- Advanced mixing technology or equipment manufacturing.
- Concrete or general contracting.
- Development.

*Contact:*

Del E. Webb Construction  
<http://construction.asu.edu/cim>  
dewsc@asu.edu  
USE 138  
480/965-3615

**Construction (General Building Construction) (BS) ESCONGBS**

Ira A. Fulton School of Engineering

*Program Description:* Through the B.S. in construction program, with a concentration in general building construction, students learn to organize, lead and manage the building process. Builders are one of the three most vital individuals on a job site, equal in status and importance to the architect and engineer. Students learn the basics of design, how to estimate and control the costs of a project, the many construction methods used, what it takes to manage the people involved and the various types of contracts. Students are prepared with the computer, management, technical and people skills needed to succeed. This is one of two construction programs in the state of Arizona and one of approximately 60 accredited programs in the nation.

*Language Requirement: N | Program Fee: Y*

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

**Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

**Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* The general building construction concentration provides a foundation for students who wish to pursue careers as estimators, project managers, project engineers and eventually become owners of firms engaged in the construction of industrial, commercial and institutional structures.

*Contact:*

Del E. Webb Construction  
<http://construction.asu.edu>  
[dewsc@asu.edu](mailto:dewsc@asu.edu)

USE 138  
480/965-3615

### **Construction (Heavy Construction) (BS) ESCONHBS**

Ira A. Fulton School of Engineering

*Program Description:* Through the B.S. in construction program (with a concentration in heavy construction), students learn to organize, lead and manage the building process. Builders are one of the three most vital people on a job site, equal in status and importance to the architect and engineer. Students learn the basics of design, how to estimate and control the costs of a project, the many construction methods used, what it takes to manage the people involved and the various types of contracts. Students are prepared with the computer, management, technical and people skills needed to succeed. This is one of two construction programs in the state of Arizona and one of approximately 60 accredited programs in the nation.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

#### **Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

#### **Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

### **Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* The heavy construction concentration prepares students for careers related to the public works discipline. Graduates become project managers, estimators, schedulers, or a combination of all three at an executive level. Typical heavy construction-oriented projects include highways, airports, bridges, power plants, rapid transit systems, harbor and water facilities, pipelines, dams, tunnels, canals, sewerage systems and water works. Heavy construction managers, through education and experience, are capable of implementing significant facets of construction on a timely and economical basis with proficiency and integrity.

*Contact:*

Del E. Webb Construction  
<http://construction.asu.edu>  
dewsc@asu.edu  
USE 138  
480/965-3615

### **Construction (Residential Construction) (BS) ESCONRBS**

Ira A. Fulton School of Engineering

*Program Description:* Through the B.S. in construction program (with a concentration in residential construction), students learn to organize, lead and manage the building process. Builders are one of the three most vital people on a job site, equal in status and importance to the architect and engineer. This program teaches the basics of design, how to estimate and control the costs on a project, the many construction methods used, what it takes to manage the people involved and the various types of contracts. Students are prepared with the computer, management, technical and people skills needed to succeed. This is one of two construction programs in the state of Arizona and one of approximately 60 accredited programs in the nation.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the

university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

**Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

**Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* The residential construction concentration prepares students for careers in the housing sector of the industry. Graduates become project managers, estimators, schedulers or a combination of all three at the executive level.

*Contact:*

Del E. Webb Construction  
<http://construction.asu.edu>  
dewsc@asu.edu  
USE 138  
480/965-3615

**Construction (Specialty Construction) (BS) ESCONSBS**

Ira A. Fulton School of Engineering

*Program Description:* Through the B.S. in construction program (with a concentration in specialty construction), students learn to organize, lead and manage the building process. Builders are one of the three most vital individuals on a job site, equal in status and importance to the architect and engineer. This concentration program emphasizes the construction process at the subcontractor level. Students learn the basics of design, how to estimate and control the costs of a project, the many construction methods used, what it takes to manage the people involved and the various types of contracts. Students are prepared with the

computer, management, technical and people skills needed to succeed. This is one of two construction programs in the state of Arizona and one of approximately 60 accredited programs in the nation.

*Language Requirement: N | Program Fee: Y*

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

**Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

**Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* The specialty construction concentration prepares students for careers with contractors, such as mechanical and electrical construction firms.

*Contact:*

Del E. Webb Construction  
<http://construction.asu.edu>  
[dewsc@asu.edu](mailto:dewsc@asu.edu)

USE 138  
480/965-3615

### Electrical Engineering (BSE) ESEEEBSE

Ira A. Fulton School of Engineering

*Program Description:* The goal of the electrical engineering undergraduate program is to prepare graduates for positions as electrical engineers. Faculty in the Ira A. Fulton School of Engineering offer a B.S.E. in electrical engineering. Following initial course work in mathematics and sciences, the engineering core classes build a solid base of engineering knowledge. Beyond the engineering core, the electrical engineering curriculum includes a number of required electrical engineering and technical elective courses; areas include systems, circuits, power, solid-state devices, electromagnetics and computer engineering. Approved technical elective courses provide students with an opportunity either to broaden their background in electrical engineering or to study, in greater depth, technical subjects in which they have special interest.

The electrical engineering programs at ASU are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

#### **Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

#### **Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* Graduates with the B.S.E. in electrical engineering find many exciting opportunities in industry. These include semiconductor chip designers and manufacturers, electric power utilities, consulting companies, communication equipment and network providers, computers and peripheral devices manufacturers and defense organizations. The degree also prepares graduates for continued learning experiences, either in a formal graduate program or in continuing education applications.

*Contact:*

Department of Electrical Engineering  
<http://ee.fulton.asu.edu>  
askee@asu.edu  
GWC 205  
480/965-3424

**Electrical Engineering (Electric Power and Energy Systems) (BSE) ESEEEPBSE**

Ira A. Fulton School of Engineering

*Program Description:* The goal of the electric power and energy systems concentration is to prepare graduates for positions in industries dealing with conventional power generation (fossil fuel and nuclear) and alternative energy systems, including solar, wind and fuel cells.

Employment opportunities range from utility companies to power equipment manufacturers, consulting firms, research and design organizations. This concentration will also prepare students to pursue graduate degrees in the areas of power systems, power generation and renewable and sustainable energy sources.

The electrical engineering programs at ASU are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements.

Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

**Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

**Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* Career opportunities for graduates with a concentration in electric power and energy systems include employment in utility companies, consulting engineer firms, power equipment manufacturers, state and municipal agencies, research and design organizations as well as entrepreneurial opportunities.

*Contact:*

Department of Electrical Engineering  
<http://ee.fulton.asu.edu>  
askee@asu.edu  
GWC 205  
480/965-3424

## Engineering Special Studies (Premedical Engineering) (BSE) ESESPBSE

Ira A. Fulton School of Engineering

*Program Description:* In the past decade, the interrelation between engineering and medicine has become vigorous and exciting. Rapidly expanding technology dictates that engineering will continue to become increasingly involved in all branches of medicine. As this involvement develops, so will the need for physicians trained in the engineering sciences: medical professionals with a knowledge of computer technology, transport phenomena, biomechanics, bioelectric phenomena, operations research and cybernetics.

The B.S.E. in engineering special studies with a concentration in pre-medical engineering is designed to meet the needs of this growing profession.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

### **Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

### **Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

### **Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* This program's focus is of special interest to students who desire entry into a medical college and whose medical interests lie in research, aerospace and undersea medicine, artificial organs, prostheses, biomedical engineering or biophysics.

*Contact:*

Engineering Special Studies Program  
<http://hdbe.fulton.asu.edu>  
hdbe@asu.edu  
ECG 334  
480/965-3028

**Industrial Engineering (BSE) ESIEEBSE**

Ira A. Fulton School of Engineering

*Program Description:* Industrial engineers design and manage complex systems in the manufacturing and service industries through the integration of people, material, information, capital, energy and equipment. The faculty in the Ira A. Fulton School of Engineering offer a B.S.E. in industrial engineering.

Industrial engineering applies systems modeling and analysis skills to ensure that high-quality products and services are achieved with the optimal use of resources. Industrial engineering focuses on the total picture of developing, producing, delivering and servicing products and services to satisfy customers. The industrial engineer blends knowledge of mathematics, engineering principles, computing technologies, systems modeling and simulation tools and human factors with strong management and communication skills to achieve this goal. This gives an industrial engineer broad knowledge of an organization and provides increased opportunities for advancement into management and leadership.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering

requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

**Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

**Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* Graduates in industrial engineering are prepared to design and manage systems for a wide range of organizations. They find exciting career opportunities in all types of manufacturing and service industries, including semiconductor manufacturing, automotive, aerospace, defense, banking, finance, transportation, health care, telecommunications, management consulting and government.

*Contact:*

Industrial, Systems & Operations Engineering Prgm

<http://ie.fulton.asu.edu>

ie@asu.edu

GWC 502

480/965-3185

**Materials Science & Engineering (BSE) ESMSEBSE**

Ira A. Fulton School of Engineering

*Program Description:* Materials engineers are responsible for designing and developing new and improved materials for a wide variety of engineering applications. The faculty in the Ira A. Fulton School of Engineering offer a B.S.E. in materials science and engineering. Courses in materials teach students about the structure of materials, how to process them to improve their structure and how the structure affects their properties and performance.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

**Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

**Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* Materials engineers are in demand in a wide range of industries, including the automotive, aerospace, electronics, semiconductor, computer and healthcare professions. The career paths in these industries offer opportunities to impact technological advances through working in a team environment with engineers from the chemical, electrical, mechanical, aerospace and other engineering disciplines.

*Contact:*

Materials Program  
<http://som.asu.edu/>  
som@asu.edu

ECG 303  
480/727-9311

### Mechanical Engineering (BSE) ESMAEMBSE

Ira A. Fulton School of Engineering

*Program Description:* Mechanical engineering is a creative, diverse discipline. Mechanical engineers design, build and control the devices, machines, processes, and systems that are the mainstay of modern industrialized society.

Students are prepared for a career in mechanical engineering through a curriculum that includes study of the principles governing energy transfer, mechanical design, sensors and control devices and the application of these principles to the creative solution of practical modern problems.

The mechanical engineering programs at ASU are accredited by the Engineering Accreditation Commission of ABET.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

#### **Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

#### **Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**

3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* A major strength of a mechanical engineering education is the flexibility it provides in future employment opportunities for its graduates. Mechanical engineers are employed in virtually every kind of industry. They are involved in seeking new knowledge through research; in generating creative design and development; and in the production, control, management and sales of the devices and systems needed by society.

The objectives of the mechanical engineering program are for graduates to be employed in mechanical engineering or a related field or accepted to graduate school and:

Graduates will have the technical skills for career success, including the ability to think in a critical and evaluative manner and to consider a broad perspective, in order to solve technical and non-technical problems.

Graduates will have the professional skills for career success, including an awareness of ethical responsibility, the ability to communicate well and to work successfully within diverse groups.

*Contact:*

Mechanical and Aerospace Engineering Program

<http://mae.fulton.asu.edu>

mae@asu.edu

ECG 346

480/965-3291

**Mechanical Engineering (Computational and Mathematical Mechanics) (BSE)  
ESMAECBSE**

Ira A. Fulton School of Engineering

*Program Description:* As mathematical and numerical modeling takes on a much larger role in product development, graduates who are highly skilled in computational and mathematical engineering will be in high demand. The concentration in computational and mathematical mechanics, under the B.S.E. in mechanical engineering, is designed to teach students the modern computational tools available for solving large-scale and complex technical problems. The curriculum focuses on high-performance computing and the accurate modeling of large- and small-scale systems.

The mechanical engineering programs at ASU are accredited by the Engineering Accreditation Commission of ABET.

*Language Requirement: N | Program Fee: Y*

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

**Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

**Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* Mechanical engineers are employed in virtually every kind of industry. They are involved in seeking new knowledge through research; in generating creative design and development; and in the production, control, management and sales of the devices and systems needed by society. Therefore, a major strength of a mechanical engineering education is the flexibility it provides in future employment opportunities for its graduates.

The objectives of the mechanical engineering program are for graduates to be employed in mechanical engineering or a related field or accepted to graduate school and:

Graduates will have the technical skills for career success, including the ability to think in a critical and evaluative manner and to consider a broad perspective, in order to solve technical and non-technical problems.

Graduates will have the professional skills for career success, including an awareness of ethical responsibility, the ability to communicate well and to work successfully within diverse groups.

*Contact:*

Mechanical and Aerospace Engineering Program

<http://mae.fulton.asu.edu>

mae@asu.edu

EC G346

480/965-3291

**Mechanical Engineering (Energy & Environment) (BSE) ESMAEEBSE**

Ira A. Fulton School of Engineering

Not accepting applications.

*Program Description:* The concentration in energy and environment, within the B.S.E. in mechanical engineering, seeks to prepare students to analyze technical problems in energy efficiency, renewable energy, environmental sustainability, air pollution, climate change and other timely issues facing the global community. Although the primary focus of this program is technical, the general education courses in the areas of the humanities and social and behavioral sciences introduce students to the global, political and societal issues relating to energy and environment. By focusing on issues such as air pollution, water scarcity and the lack of alternative transportation, this program becomes even more attractive for employers in the greater Phoenix area.

The mechanical engineering programs at ASU are accredited by the Engineering Accreditation Commission of ABET.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* The admission requirements for majors in the Ira A. Fulton School of Engineering are higher than minimum university admission requirements. Students should select a second major choice outside engineering when applying for admission. Students who are not eligible for admission to engineering and who do not indicate a second major choice will be placed in exploratory mathematics, physical sciences, engineering and technology within University College.

International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant, (<http://students.asu.edu/international-admission>) then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 79 on iBT (Internet-based) or a minimum IELTS score of 6.5.

**Freshman Admission:**

1. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score; **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class, **and**
2. No high school math or science competency deficiencies.

**Transfer students with fewer than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for less than 24 transfer hours, **and**
2. No high school math or science competency deficiencies, **and**
3. Minimum 1140 SAT combined math and verbal or minimum 24 ACT combined score, **or** 3.00 minimum ABOR GPA **or** class ranking in top 25 percent of high school class.

**Transfer students with more than 24 transferable college credit hours:**

1. Minimum transfer GPA of 3.00 for 24 or more transfer hours, **and**
2. No high school math or science competency deficiencies (if undergraduate admissions requires submission of a high school transcript).

*Career Opportunities:* Mechanical engineers are employed in virtually every kind of industry. They are involved in seeking new knowledge through research; in generating creative design and development; and in the production, control, management and sales of the devices and systems needed by society. Therefore, a major strength of a mechanical engineering education is the flexibility it provides in future employment opportunities for its graduates. Students completing this concentration have opportunities as power plant designers, environmental consultants and heating, ventilation and air-conditioning (HVAC) engineers.

The objectives of the mechanical engineering program are for graduates to be employed in mechanical engineering or a related field or accepted to graduate school and:

Graduates will have the technical skills for career success, including the ability to think in a critical and evaluative manner and to consider a broad perspective, in order to solve technical and non-technical problems.

Graduates will have the professional skills for career success, including an awareness of ethical responsibility, the ability to communicate well and to work successfully within diverse groups.

*Contact:*

Mechanical and Aerospace Engineering Program

<http://mae.fulton.asu.edu>

[mae@asu.edu](mailto:mae@asu.edu)

ECG 346

480/965-3291

## Honors – Barrett, The Honors College

### Honors College 9HOHONALL

*Program Description:* Barrett, The Honors College at Arizona State University is a selective, residential college that recruits academically outstanding undergraduates across the nation. Named “Best Honors College” in the nation, this residential community has more National Merit Scholars than Princeton, Yale or Stanford, and Barrett students benefit from a \$10 million endowment used exclusively to support honors students and their projects.

Barrett students have the unique advantage of both experiencing a small, intellectually and socially vibrant environment, while having access to the vast resources of a major research university in ASU. All Barrett students are also enrolled in a disciplinary college and pursue one or more of the 250 available majors and concentrations. Their education is the result of the collaborative efforts of the Barrett's directly appointed faculty and of faculty appointed in the college of their major.

Barrett accepts high performing, academically engaged students and works with them in collaboration with all of the units at ASU to contribute to student success. Most students enter as freshmen, but about 90 each year enter after one or more semesters at a university or college (primarily from ASU).

### Special Opportunities

- **Lorraine W. Frank Office of National Scholarship Advisement:** this office assists students in identifying nationally competitive scholarship programs appropriate to each individual's intellectual and career goals.  
[http://honors.asu.edu/w-National\\_Scholarships-53.aspx](http://honors.asu.edu/w-National_Scholarships-53.aspx)
- **Undergraduate Research Opportunities:** Barrett encourages students to participate in undergraduate research throughout the university. The college maintains a list of current opportunities university-wide.  
[http://honors.asu.edu/w-Research\\_Opportunities-51.aspx](http://honors.asu.edu/w-Research_Opportunities-51.aspx)
- **Travel:** Barrett study abroad programs, directed and taught by Barrett faculty, occur during the summer and allow students to earn honors credit. Students can also take advantage of the Great American Cities program and

visit cities throughout the U.S. [http://honors.asu.edu/w-Travel\\_Abroad-52.aspx](http://honors.asu.edu/w-Travel_Abroad-52.aspx)

- **Internships:** students in Barrett participate in special internship opportunities—in government, industry and the private sector—throughout metropolitan Phoenix and elsewhere. <http://honors.asu.edu/w-Internships-50.aspx>
- **Events/Programming:** students enrolled in Barrett benefit from preeminent guest speakers, special lectures and visits from some of the nation's greatest contributors to contemporary thought in society. The college hosts two of the university's premier scholar-in-residence programs, the Centennial Lecture and the John J. Rhodes Chair.

### **Barrett Honors Requirements Overview**

Students complete 36 hours of honors credits within the 120 hours required to earn a bachelor's degree by completing HON courses, honors-only courses in other ASU units, special class projects with faculty in other ASU units, internships, undergraduate research and summer study abroad.

To graduate from Barrett, students must complete the required honors courses with a minimum grade of “C” (2.00), defend a thesis/creative project and have a cumulative GPA of 3.25.

All students entering Barrett with less than 60 credits completed at a university/college after high school graduation:

- Must complete HON 171 and HON 272/273 The Human Event by the time they reach 45 credits at ASU.
- Must complete 36 honors credits, of which at least 18 must be upper-division.
- May have up to 30 of the 36 honors credits as upper-division courses.

All students entering Barrett with greater than 60 credits completed at a university/college after high school graduation:

- Must complete 21 upper-division honors credits.
- One HON 300-level seminar.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* Students who have demonstrated high levels of academic achievement in high school or college may apply for admission to Barrett. All candidates for admission must file an application to Barrett separate from their ASU application and must be admitted to ASU before Barrett can consider their application.

Applicants are evaluated on the basis of:

1. High school GPA (Arizona Board of Regents GPA based on 16 competency courses).
2. High school class rank.
3. Performance on the SAT or ACT.
4. Talents that contribute to leadership and community service. Continuing ASU or transfer students are evaluated on their college GPA. Please contact the Honors College for more information.

*Contact:*

The Barrett Honors College  
<http://honors.asu.edu>  
IRISH A121  
4809654033

## **Journalism and Mass Communication, Walter Cronkite School of**

### **Journalism & Mass Communication (BA) CSJMCBA**

Walter Cronkite School of Journalism and Mass Communication

*Program Description:* The Walter Cronkite School of Journalism and Mass Communication, named in honor of legendary CBS news anchor Walter Cronkite, is one of the largest and most successful professional journalism schools in the country. Students study print and online journalism, broadcast journalism, or strategic media/public relations, leading to a B.A. in journalism and mass communication. The Cronkite school is located at the ASU at the Downtown Phoenix campus, in the heart of the 13th largest media market in the U.S. The school features state-of-the-art computer labs, editing suites, production studios and classrooms dedicated to journalism education.

*Language Requirement: Y | Program Fee: Y*

*Admission Requirements:* The Bachelor of Arts in Journalism and Mass Communication degree program has higher admission requirements. Students should select a second major on the application. Students who are not admitted to the Cronkite School and who did not select a second major, or are not admissible to the second major, are admitted to Exploratory Social and Behavioral Sciences within University College.

Freshman applicants must meet the following standards:

1. Have a 3.00 (4.00 = A) ABOR GPA;
2. Have no English competency deficiencies; and
3. Meet one of the following two requirements, top 25 percent of high school class, or 1040 SAT Reasoning or 22 ACT score.

Transfer students **applying for fall 2010 or later** (with 12 or more transfer hours after high school graduation) are required to have a cumulative transfer GPA of 3.00 or higher and no English competency deficiencies.

Transfer students **applying for fall 2009/spring 2010** (with 12 or more transfer hours after high school graduation) are required to have a cumulative transfer GPA of 3.25 or higher and no English competency deficiencies

Transfers should contact the school for additional steps after admission to ASU. Students should select a second major on the application. For more information regarding transfer admission, see [http://cronkite.asu.edu/undergrad/xfer\\_major\\_change.php](http://cronkite.asu.edu/undergrad/xfer_major_change.php).

*Career Opportunities:* Walter Cronkite School of Journalism and Mass Communication graduates work for newspapers, radio and television stations, online services, magazines, public relations firms and corporate communication divisions. Positions include reporters, editors, photojournalists, writers and media managers.

*Contact:*

Walter Cronkite School of Journalism & Mass Comm  
<http://cronkite.asu.edu>  
[cronkiteadvising@asu.edu](mailto:cronkiteadvising@asu.edu)  
CRONK 302  
602/496-5555

## Law, Sandra Day O'Connor College of

### Legal Studies (BS) LWLAWBS

Sandra Day O'Connor College of Law

*Program Description:* The Bachelor of Science in Legal Studies offers students the practical theory and skills-based knowledge to succeed in today's legal marketplace. This rigorous **online-only** degree program is the first such program developed and delivered by a law school. The Sandra Day O'Connor College of Law has specifically designed the curriculum to teach students how to research legal issues, draft legal documents, utilize legal resources and technology, and understand the legal process from the perspective of law firms, courts, administrative agencies, and businesses. This degree program is not intended as preparation for law school. Currently the degree program is available to first-time freshman only. LAW courses for second year and beyond are still under development. \*\*\*We expect to be ready to welcome transfer students with a limited number of credits into our program in Fall 2010.\*\*\* Please check with our web site or contact a transfer advisor at that time.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* An undergraduate degree in Legal Studies prepares graduates for careers in the ever-expanding legal marketplace, both in the public and private sectors and in domestic and international workplaces. Whether as a legal assistant, paralegal, court representative, law firm administrator, compliance officer, legislative assistant, social worker, or other law-related professional, the BSLS will give students the skills to excel and succeed in the wide range of fields touched by law. This degree program is not intended as preparation for law school.

*Contact:*

Sandra Day O'Connor College of Law  
www.law.asu.edu/BSLS  
BSLSProgram@asu.edu  
Armstrong Hall  
480/965-6181

## Letters and Sciences, School of

### Applied Science (Technical Communication) (BAS) LSTECBAS

School of Letters and Sciences

*Program Description:* The B.A.S. is a flexible degree plan designed specifically for students who have earned an A.A.S. from a regionally accredited institution. This major combines the technical experience gained in the student's associate degree program with a broader education of management, leadership, critical thinking and communication skills.

Technical communication is applied workplace communication that makes technical information understandable and available to many audiences. In the technical communication concentration, students learn how to produce, design and manage information using both traditional and developing technologies.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students applying to this program must have completed an Associate of Applied Science (A.A.S.) degree from a regionally accredited institution. Not available for freshmen.

*Career Opportunities:* The Bureau of Labor Statistics estimates the need for writers and editors will increase by 25 percent over the next five years. Software and electronics companies, media corporations, financial institutions, government agencies, nonprofits and other areas will see an increased demand for writers. Students in the program will prepare for careers as:

- Desktop publishers.
- Information designers.
- Multimedia designers.

- Publications managers.
- Technical editors.
- Technical writers.
- Web page and intranet page designers.

*Contact:*

School of Letters and Sciences  
<http://techcomm.asu.edu/>  
 SAAS@asu.edu  
 SUTON 301  
 480/727-5100

**General Studies (BGS) LSGNSBGS**

School of Letters and Sciences

*Program Description:* The Bachelor of General Studies with a major in General Studies offers students a flexible, innovative path to degree completion. Graduates of the program will be informed and effective members of society, who are well-prepared for a changing global marketplace with its diverse cultures. The theme of this degree, offered by the School of Letters and Sciences on the Downtown Phoenix campus, is society and the individual. Students will explore the tensions between individualism and collectivism, the public and private self and the interplay of culture and identity.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* General studies majors have the option of working in almost any field that requires effective interaction with others, from sales to social services, organizational management or government administration. Graduates will be equipped with transferable skills highly desired by many employers; therefore, a wide array of job choices is available. The B.G.S. creates great flexibility in career choice because of the versatility within the program.

Graduates may choose to enter one of the areas for which their concentration prepares them, including corporate communications, media, advertising, marketing, sales, tourism, hospitality, higher education, nonprofit administration, the helping professions or government sectors.

*Contact:*

School of Letters and Sciences  
<http://sls.asu.edu/>  
 UCENT 300  
 602/496-4000

**History & Culture (BA) ECHSTCULBA**

School of Letters and Sciences

*Program Description:* The B.A. in history and culture focuses on public policy, archival work, Southwest history and related fields. Six degree tracks are available:

- Archival preservation and digital media.
- Environmental history and culture.
- History and culture of the American southwest.
- History and philosophy of science and technology.
- History and public policy.
- History for secondary teachers.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The B.A. in history and culture prepares scholars and teachers for graduate or professional study and careers in education, writing and other related fields. Career prospects for secondary history and social studies teachers in Arizona are particularly strong. Students in the program develop skills in analyzing ideas and problems, finding and evaluating information, communicating effectively and presenting clear and logical arguments. With these skills, graduates of the program can find jobs in public policy, government, lobbying, social work, program management, museum management, archiving, curating and with nonprofit organizations. The degree also prepares students to continue in graduate and professional programs.

*Contact:*

School of Letters and Sciences  
<http://www.poly.asu.edu/saas/humanitiesarts/hua@asu.edu>  
SANCA 233  
480/727-1526

### **Interdisciplinary Studies (BIS) LSBISBIS**

School of Letters and Sciences

*Program Description:* Interdisciplinary studies is an approach to answering questions, solving problems and addressing contemporary social issues from multiple perspectives. Interdisciplinary students develop the intellectual tools needed to build bridges across academic disciplines and apply their skills, innovations and knowledge in various academic and practical settings. In core classes, students develop a portfolio that showcases each individual's skills, interests and talents. This portfolio and the applied learning experience provide each student with valuable resources for flexible, individualized career planning and development.

The B.I.S. program may be completed in-person or online. Working with an advisor, students choose from and combine two of more than 100 concentrations that represent academic interests they wish to integrate. Of these, the following concentrations are available to students attending in-person or online: family and

human development, film and media studies, history (U.S. or European track), justice studies, political science, religious studies, small business, sociology, technical writing, and women and gender studies.

A B.I.S. in organizational studies is also available online. For more information visit <http://asuonline.asu.edu/programs> or e-mail [orgstudies@asu.edu](mailto:orgstudies@asu.edu).

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* The B.I.S. program is available to all students in good academic standing who have achieved sophomore, junior or senior standing. Students must complete the online B.I.S. cyber workshop (found online at <http://sls.asu.edu/bis/>) prior to meeting with an advisor to declare their major as interdisciplinary studies.

*Career Opportunities:* Because of the flexibility of the B.I.S. degree, B.I.S. graduates leave ASU ready for their next steps in life, whether employment in an entry-level position, promotional opportunities, or for graduate studies in a variety of disciplines. Recent examples include a graduate with biology and chemistry concentrations who is pursuing a master of pharmacy degree, another graduate who combined business and communication and now owns a small business, and another who integrated sociology and family studies to further a career in law enforcement.

*Contact:*

School of Letters and Sciences

<http://sls.asu.edu/>

[bis@asu.edu](mailto:bis@asu.edu)

USAB 203

480/965-1970

### **Interdisciplinary Studies (BIS) LSBISBIS**

School of Letters and Sciences

*Program Description:* Interdisciplinary studies is an approach to answering questions, solving problems and addressing contemporary social issues from multiple perspectives. Interdisciplinary students develop the intellectual tools needed to build bridges across academic disciplines and apply their skills, innovations and knowledge in various academic and practical settings. In core classes, students develop a portfolio that showcases each individual's skills, interests and talents. This portfolio and the applied learning experience provide each student with valuable resources for flexible, individualized career planning and development.

The B.I.S. program may be completed in-person or online. Working with an advisor, students choose from and combine two of more than 100 concentrations that represent academic interests they wish to integrate. Of these, the following concentrations are available to students attending in-person or online: family and

human development, film and media studies, history (U.S. or European track), justice studies, political science, religious studies, small business, sociology, technical writing, and women and gender studies.

A B.I.S. in organizational studies is also available online. For more information visit <http://asuonline.asu.edu/programs/> or e-mail [orgstudies@asu.edu](mailto:orgstudies@asu.edu).

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* The B.I.S. program is available to all students in good academic standing who have achieved sophomore, junior or senior standing. Students must complete the online B.I.S. cyber workshop (found online at <http://sls.asu.edu/bis/>) prior to meeting with an advisor to declare their major as interdisciplinary studies.

*Career Opportunities:* Because of the flexibility of the B.I.S. degree, B.I.S. graduates leave ASU ready for their next steps in life, whether employment in an entry-level position, promotional opportunities, or for graduate studies in a variety of disciplines. Recent examples include a graduate with biology and chemistry concentrations who is pursuing a master of pharmacy degree, another graduate who combined business and communication and now owns a small business, and another who integrated sociology and family studies to further a career in law enforcement.

*Contact:*

School of Letters and Sciences

<http://sls.asu.edu/>

[bis@asu.edu](mailto:bis@asu.edu)

USAB 203

480/965-1970

### **Interdisciplinary Studies (Management Communication) (BIS) LSMGTCBIS**

School of Letters and Sciences

*Program Description:* Management communication is a concentration in the interdisciplinary studies degree program. Interdisciplinary students develop the intellectual tools needed to build bridges between academic disciplines and apply their skills, innovations and knowledge in various academic and practical settings.

Via the management communication curriculum, students learn to apply principles of management and communication to increase organizational effectiveness, gaining valuable knowledge of management styles, communication strategies, collaboration and team skills, diversity, ethics, conflict resolution, leadership and organizational behavior. This is an employer-based program: all course work for the management communication concentration is offered at corporate-based, off-campus sites with public access. Students are charged an additional fee to defray costs of facilities and off-campus student services. All courses in the concentration are offered as evening classes, scheduled in a condensed seven-week format.

*Language Requirement: N | Program Fee: N*

*Admission Requirements:* Students who have completed at least 30 hours of transferable college course work and meet minimum university transfer admission requirements (<http://transfer.asu.edu/transferadmission>) are eligible for admission; first-time freshman are not eligible.

*Career Opportunities:* By engaging a breadth of knowledge and experience, and by acquiring the skills to integrate various domains of knowledge, management communication students prepare themselves for careers in:

- Business.
- Government.
- Healthcare administration.
- Nonprofit agencies.
- Service industry.

Many management communication students already have a chosen career field, yet desire a degree that is versatile, flexible and meaningful and affords the opportunity for continued career development and advancement.

*Contact:*

School of Letters and Sciences

<http://mgtcom.asu.edu>

[mgtcom@asu.edu](mailto:mgtcom@asu.edu)

ASU Online and Extended Campus/Skysong 315BC

4808841528

### **Interdisciplinary Studies (Organizational Studies) (BIS) LSORGBIS**

School of Letters and Sciences

*Program Description:* Interdisciplinary Studies online degree program is an approach to answering questions, solving problems, and addressing contemporary social issues from multiple perspectives. Interdisciplinary students develop the intellectual tools needed to build bridges between academic disciplines and apply their skills, innovations and knowledge in various academic and practical settings. The B.I.S. in organizational studies is intended for students seeking an interdisciplinary degree and a desire to learn about the dynamics of contemporary organizations. Via the organizational studies curriculum, students gain valuable knowledge of management styles, communication strategies, technologies, diversity, ethics and politics. All course work for organizational studies is offered online, giving students freedom and flexibility in completing their requirements. By engaging a breadth of knowledge and experience, and by acquiring the skills to integrate various domains of knowledge, organizational studies students prepare themselves for careers in:

- Business.
- Government.

- Health-care administration.
- Nonprofit agencies.
- Service industry.

Many organizational studies students already have a chosen career field, yet desire a degree that is versatile, flexible and meaningful, and affords the opportunity for continued career development and advancement.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Because of the flexibility of the B.I.S. program, graduates leave ASU ready for their next steps in life, whether employment in an entry-level position, promotional opportunities or for graduate studies in a variety of disciplines. Recent graduates have found opportunities in education, business, health-care administration, nonprofit administration, tourism and many other exciting fields.

*Contact:*

School of Letters and Sciences  
<http://sls.asu.edu/>  
[distance@asu.edu](mailto:distance@asu.edu)  
 UASB 203  
 4809651970

### **Liberal Studies (BLS) LABLSBLS**

School of Letters and Sciences

*Program Description:* The B.L.S. is an online program that students can complete via the internet from anywhere in the world. The B.L.S. is an excellent choice for working adults and can sometimes be completed in as little as one year as a degree completion program. Students in the B.L.S. program are able to design their own transdisciplinary major based on their personal interests.

For more information on eligibility requirements, visit <http://asuonline.asu.edu>.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Although a liberal studies major is not professionally or vocationally oriented, the program shares with all other liberal arts and science degrees the goal of developing analytical and communicative abilities. The program offers breadth of learning in an online setting. The liberal studies degree is transdisciplinary, providing the student with a “thematic” approach to his/her education. Liberal studies graduates are prepared to enter the work force or pursue graduate or professional studies at the completion of their undergraduate program.

*Contact:*

School of Letters and Sciences  
<http://clas.asu.edu/liberalstudies/>

Distance@asu.edu  
SKYSONG  
480/884-1590

### **Literature, Writing & Film (BA) ECLWFBA**

School of Letters and Sciences

*Program Description:* The B.A. in literature, writing and film focuses on effective writing, critical thinking and sophisticated reading of literary and nonliterary texts. Three degree tracks are available:

- English for secondary teachers.
- Writing.
- Literature and film.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The B.A. in literature, writing and film program prepares scholars and teachers for graduate or professional study and for careers in education, writing and other related fields. Career prospects for secondary language arts teachers in Arizona are particularly strong. More importantly, students in the program will develop skills that employers value, such as analyzing ideas and problems, finding and evaluating information, communicating effectively and presenting clear and logical arguments. With these skills, graduates of the program can find jobs in creative and technical writing, marketing, lobbying, program management, editing, reporting, public relations, health care, social work, government, nonprofit organizations and financial services.

#### *Contact:*

School of Letters and Sciences  
<http://www.poly.asu.edu/saas/humanitiesarts/hua@asu.edu>  
SANCA 233  
480/727-1526

### **Science, Technology and Society (BS) ECSTSBS**

School of Letters and Sciences

*Program Description:* Questions surrounding the interaction of science, technology and human systems are highly interdisciplinary and cultural, requiring analytical techniques that transcend space and time. Thus, the Science, Technology and Society Program stresses the need to step outside both disciplinary and cultural boxes in pursuit of knowledge. Accordingly, the program is heavy on cultural and information literacy and critical thinking. The primary goal is to produce generalists who understand the intricate interrelationship of science, technology and society and are armed with the technical skills to change their environment. The following tracks are available:

- Science, technology and governance.
- Global technology and development and general science.
- Technology and society.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* The bachelor's degree in science, technology and society prepares professionals and scholars for careers in the twenty-first century world focusing primarily, but not exclusively, on the interaction of science and technology with human systems. Graduates are prepared for professional careers in government, nonprofit organizations, business, education and law and for graduate or professional study. The focus of the program is on developing the technical skills required to audit the social, political and policy impact of technological advancement and the competence required to navigate questions surrounding the future trajectory of science and technology.

*Contact:*

School of Letters and Sciences  
<http://sls.asu.edu/ss/sts/index.html>  
 sbscpoly@asu.edu  
 SANCA 252  
 480/727-1716

### **Technical Communication (BS) LSTECBS**

School of Letters and Sciences

*Program Description:* The B.S. in technical communication is the only undergraduate technical communication degree program available in the state of Arizona. Technical communication is applied workplace communication that makes technical information understandable and available to many audiences. In the technical communication program, students learn how to produce, design and manage information using both traditional and developing technologies.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* The Bureau of Labor Statistics estimates the need for writers and editors will increase by 25 percent over the next five years. Software and electronics companies, media corporations, financial institutions, government agencies, nonprofits and other areas will see an increased demand for writers. Students in the program will prepare for careers as:

- Desktop publishers.
- Information designers.
- Multimedia designers.
- Publications managers.
- Technical editors.
- Technical writers.

- Web page and intranet page designers.

*Contact:*

Dean, School of Letters & Sciences

<http://techcomm.asu.edu/>

sls@asu.edu

SANCA 251

480/727-1526

## Liberal Arts and Sciences, College of

### African & African American Studies (BA) LAAFRBA

College of Liberal Arts and Sciences

*Program Description:* African and African American Studies (AAAS) is an interdisciplinary B.A. program that focuses on people of African descent throughout the world and the diversity of past and present experiences of those who live in the United States, Africa, the Caribbean, South America and Central America. As an institutional program, AAAS is structured to:

1. Prepare students of all ethnicities to better understand, value and more effectively participate in our increasingly diverse society.
2. Combine knowledge of the African diaspora with intellectual and practical training in specific areas to create more effective communities and global partnerships.
3. Provide students with a foundation for advanced studies in such fields/professions as history, English, sociology, political science, communications, arts, public administration, law, psychology, social work, education and business.

*Language Requirement: Y | Program Fee: N*

*Career Opportunities:* Because of its emphasis on various social aspects and groups, AAAS provides students with practical applications useful for various work places. The minor requirement of AAAS helps students develop cultural sensitivity and prepares them for careers in administration, advertising, counseling, travel, business, international relations, justice, journalism, human resources, management and education. Our program prepares students for work in civil rights organizations, colleges, universities, corporations, government agencies, hotel chains, the insurance industry, law firms, libraries, museums, nonprofit organizations, the Peace Corps, political action groups, public relation firms, research organizations, sales departments, social service agencies, travel agencies and many more.

*Contact:*

School of Social Transformation

<http://aaas.clas.asu.edu/>

aframstu@asu.edu  
WILSN 140  
4809654399

### **American Indian Studies (BS) LAAISBS**

College of Liberal Arts and Sciences

*Program Description:* The B.S. in American Indian studies provides students with unique opportunities to evaluate issues of American Indian nations within a domestic and international context. The B.S. in American Indian studies encompasses two areas of emphasis: legal, policy and community and economic development, and arts, languages and culture. The American Indian Studies Program is committed to broadening the knowledge of students interested in the histories, languages, cultures, arts and contemporary situations of American Indian nations and people. The program is designed to protect the integrity and identity of the indigenous populations of North America and to create a learning environment conducive to critical and creative thought.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* American Indian Studies graduates will be qualified to fill positions at the tribal government, state, federal and private levels. Graduates can advance to graduate school or can pursue professional careers in such fields as government service or public service. For example, federal and tribally operated schools located in remote areas within Indian Country have high turnover rates for both teachers and staff. American Indian Studies graduates should be available to help fill these positions. Furthermore, the federal government, a major employer on many reservations across the country, is in need of qualified people who are knowledgeable of Indian cultures, laws and policies. Additionally, many American Indian nations economies and infrastructures are developing at a rapid pace, and they are in continuous need to fill mid-management and management-level positions.

#### *Contact:*

American Indian Studies Program  
<http://www.asu.edu/clas/americanindian>  
AIS@asu.edu  
DHALL 356  
4807277056

### **Anthropology (BA) LAASBBA**

College of Liberal Arts and Sciences

*Program Description:* The B.A. in anthropology gives students an opportunity to learn how and why humans evolved, and how our evolutionary biological, social and cultural trajectories help us understand what it means to be human in past, present and future environments. A special feature of the ASU anthropology program is its relevance to other disciplines, including:

- Applied mathematics
- Architecture
- Area or cultural group studies
- Biology
- Community planningEconomics
- Fine arts
- Global studies
- Law
- Medicine
- Public health
- Psychology
- Religious studies
- Sociology

Anthropology provides many exciting hands-on learning opportunities through laboratories and field-based courses that focus on:

- Finding ancient human fossils.
- Unearthing buried cities, villages and hunter-gatherer camps.
- Understanding health, disease and human biology.
- Appreciating the languages and cultures of such diverse areas as Southeast Asia, the South Pacific, Latin America and the Mediterranean Basin.
- Many other topics that explore humans of the past and present.

*Language Requirement: Y | Program Fee: N*

*Career Opportunities:* The B.A. in anthropology is beneficial and useful for careers in areas such as:

- Postgraduate academic research and teaching.
- Consulting for large and small private and public organizations.
- Directing programs in the private or public sector.
- Providing healthcare as nurses, doctors or public or global health professionals.
- Analyzing and proposing policies.
- Acting as legal advocates in international cases.
- Curating cultural resources.
- Planning communities.
- Directing nonprofit organizations.

*Contact:*

School of Human Evolution & Social Change  
[http://shesc.asu.edu/undergraduate\\_studies](http://shesc.asu.edu/undergraduate_studies)  
 shesc.undergrad@asu.edu  
 SHESC 233  
 480/965-6215

## Applied Mathematics for Life and Social Sciences (BS) LAAMLBS

College of Liberal Arts and Sciences

*Program Description:* Applied mathematics for life and social sciences (AMLSS) is a new and rapidly developing crossdisciplinary field that investigates and integrates complex areas of the physical, life and social sciences. A cardinal objective of this program is to offer students the opportunities to develop purposeful competencies in mathematics as well as an appreciation for the contributions of mathematics to the fields of sciences, engineering, business, government, economics, and the power of critical thinking.

The students are taught how to use theories and techniques such as mathematical modeling and computational methods to resolve real world practical problems. They will also engage in course work directed toward an understanding of mathematical theory and its relation to other fields of study which includes an emphasis on precision of definition, reasoning to accurate conclusions and analyzing and developing solutions to problems using mathematical principles.

The B.S. in AMLSS is a challenging, but fun, curriculum that will prepare a new generation of students to pursue advanced degrees in mathematical, life or social sciences. The focus of this degree is acquiring a lifelong learning philosophy that will prepare students to become first-rate scientists and important agents of change in the shrinking global village. The AMLSS B.S. will provide students entering the environmental, life, health, mathematical and social science fields the quantitative, scientific and analytical skills that are critical but still lacking for professionals working in these areas.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Career opportunities in AMLSS are varied and diverse. Graduates from the program may work in the public or private sectors. For example, graduates with an interest in education may go into academia and become teachers or professors and/or researchers. Graduates who are more oriented toward the private and government sectors may become consultants in federal and state organizations or agencies, actuaries for banks or insurance companies, engineers, computer analysts and operations researchers. Many careers require a certain authority of quantitative methods and graduates qualified in mathematics are more marketable.

According to a survey in 1999, by the National Association of Colleges and Employers, starting salaries for mathematics graduates with a bachelor's degree averaged about \$37,300 per year and \$42,000 for those with a master's degree. Doctoral degree holders averaged \$58,900. The typical yearly salary for mathematicians employed by the federal government in supervisory, nonsupervisory and decision-making positions was \$69,000; for mathematical statisticians, \$69,000; and for cryptanalysts, \$61,100, in early 1999. An example of

other professions that require broad mathematical skills include actuary, statistician, computer programmer, systems analyst, systems engineer and operations research analyst.

*Contact:*

School of Human Evolution & Social Change  
[http://shesc.asu.edu/undergraduate\\_studies](http://shesc.asu.edu/undergraduate_studies)  
shesc.undergrad@asu.edu  
SHESC 233  
480/965-6215

**Asia Studies (East Asia) (BA) LAHSTEABA**

College of Liberal Arts and Sciences

*Program Description:* The interdisciplinary BA in Asia Studies offers students the opportunity to

study South, Southeast Asia, or East Asia in depth through a coherent concentration of academic study across a number of disciplines. The interdisciplinary approach will prepare students to deploy a variety of intellectual tools to address contemporary political, social and cultural issues in Asia and to apply their knowledge in various academic and practical settings. Students will identify which concentration (South, Southeast, or East Asia) they will pursue.

The concentration in East Asia focuses on China, Japan, Korea, and Taiwan.

*Language Requirement: Y | Program Fee: N*

*Career Opportunities:* People knowledgeable about Asia will be required in virtually every arena in which America interacts with the rest of the world, including diplomacy, law, trade, journalism, higher education, tourism, technology transfer, food security, philanthropy, humanitarian service, transportation, communication, international organizations, law enforcement, intelligence, and the military.

*Contact:*

School of Historical and Critical Inquiry  
Coor Hall, room 4587  
480/965-8364

**Asia Studies (South Asia) (BA) LAHSTSABA**

College of Liberal Arts and Sciences

*Program Description:* The interdisciplinary B.A. in Asia Studies offers students the opportunity to study South, Southeast Asia, or East Asia in depth through a coherent concentration of academic study across a number of disciplines. The interdisciplinary approach will prepare students to deploy a variety of intellectual tools to address contemporary political, social and cultural issues in Asia and to

apply their knowledge in various academic and practical settings. Students will identify which concentration (South, Southeast, or East Asia) they will pursue.

The concentration in South Asia focuses on India, Pakistan, Bangladesh and other South Asian states and societies.

*Language Requirement: Y | Program Fee: N*

*Career Opportunities:* People knowledgeable about Asia will be required in virtually every arena in which America interacts with the rest of the world, including diplomacy, law, trade, journalism, higher education, tourism, technology transfer, food security, philanthropy, humanitarian service, transportation, communication, international organizations, law enforcement, intelligence, and the military.

*Contact:*

School of Historical and Critical Inquiry  
Coor Hall, room 4587  
4809658364,

### **Asia Studies (Southeast Asia) (BA) LAHSTSEABA**

College of Liberal Arts and Sciences

*Program Description:* The interdisciplinary BA in Asia Studies offers students the opportunity to study South, Southeast Asia, or East Asia in depth through a coherent concentration of academic study across a number of disciplines. The interdisciplinary approach will prepare students to deploy a variety of intellectual tools to address contemporary political, social and cultural issues in Asia and to apply their knowledge in various academic and practical settings. Students will identify which concentration (South, Southeast, or East Asia) they will pursue.

The concentration in South Asia focuses on Burma/Myanmar, Thailand, Laos, Cambodia, Vietnam, Malaysia, Singapore, Indonesia, Brunei, East Timor, and the Philippines.

*Language Requirement: Y | Program Fee: N*

*Admission Requirements:*

*Career Opportunities:* People knowledgeable about Asia will be required in virtually every arena in which America interacts with the rest of the world, including diplomacy, law, trade, journalism, higher education, tourism, technology transfer, food security, philanthropy, humanitarian service, transportation, communication, international organizations, law enforcement, intelligence, and the military.

*Contact:*

School of Historical and Critical Inquiry  
Coor Hall, room 4587  
4809658364

### **Asian Languages - Chinese (BA) LACHIBA**

College of Liberal Arts and Sciences

*Program Description:* Students in the B.A. in Asian languages with a concentration in Chinese program study the language, literature and culture of China. They gain a respectable measure of competence in reading, writing and oral/aural skills in the Chinese language. Throughout the program, students take courses in either Japanese or Korean and related courses in Chinese and East Asian culture on topics such as Chinese history, art, religion, government, literary and cultural theory and linguistics. In addition, ASU has a summer overseas program to study Chinese.

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* Graduates have a variety of career opportunities. Many work for firms that deal with international trade for U.S. companies that have branches in China or for Chinese companies located either in the United States or China. Other graduates work for government agencies or teach (usually English) in China. Some pursue graduate work in Chinese studies, eventually teaching the language and/or culture in universities or colleges.

*Contact:*

School of International Letters and Cultures

<http://silc.asu.edu/undergraduate/majors-minors-certs>

[silcadvising@asu.edu](mailto:silcadvising@asu.edu)

LL 440

480/965-6281

### **Asian Languages - Japanese (BA) LAJPNBA**

College of Liberal Arts and Sciences

*Program Description:* Students in the B.A. in Asian languages with a concentration in Japanese program study the language, literature and culture of Japan. They gain a respectable measure of competence in reading, writing and oral/aural skills in the Japanese language. Students also gain linguistic and cultural competence through the required study of classical Japanese. Throughout the program, students take courses in either Chinese or Korean and related courses in Japanese and East Asian culture on topics such as Japanese history, art, religion, government, literary and cultural theory and linguistics. In addition, ASU offers summer or yearlong overseas programs to study Japanese.

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* Graduates have a variety of career opportunities. Many work for firms that deal with international trade for U.S. companies that have branches in Japan or for Japanese companies located either in the United States or Japan. Other graduates work for government agencies or teach (usually English) in Japan. Some pursue graduate work in Japanese studies, eventually teaching the language and/or

culture in universities or colleges. High school and elementary teaching are also possible with certification.

*Contact:*

School of International Letters and Cultures  
<http://silc.asu.edu/undergraduate/majors-minors-certs>  
silcadvising@asu.edu  
LL 440  
480/965-6281

**Biochemistry (BA) LABCHBA**

College of Liberal Arts and Sciences

*Program Description:* The B.A. in biochemistry provides students with a course of study in the fundamental knowledge of the chemical substances and vital processes of living organisms. Discoveries of new drugs, the recognition and control of new pathogens, development of new catalysts for energy transformations and the production of new materials, and solutions to problems such as food production and environmental remediation depend upon a thorough grounding in this area of science.

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* A solid undergraduate education in biochemistry provides the necessary background for career paths in research, teaching, health care, chemical industries, government and other areas. Students planning careers in medicine, dentistry, pharmacy or veterinary medicine often study biochemistry with supporting work in biology and chemistry as the route for preprofessional training.

*Contact:*

Department of Chemistry and Biochemistry  
<http://chemistry.asu.edu>  
chmugadv@asu.edu  
PS D 102  
480/965-3461

**Biochemistry (BS) LABCHBS**

College of Liberal Arts and Sciences

*Program Description:* The B.S. in biochemistry provides students with a course of study in the fundamental knowledge of the chemical substances and vital processes of living organisms. Discoveries of new drugs, the recognition and control of new pathogens, development of new catalysts for energy transformations and the production of new materials, and solutions to problems such as food production and environmental remediation depend upon a thorough grounding in this area of science.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* A solid undergraduate education in biochemistry provides the necessary background for career paths in research, teaching, health care, chemical industries, government and other areas. Students planning careers in medicine, dentistry, pharmacy or veterinary medicine often study biochemistry with supporting work in biology and chemistry as the route for preprofessional training.

*Contact:*

Department of Chemistry and Biochemistry  
<http://chemistry.asu.edu>  
chmugadv@asu.edu  
PS D 102  
4809653461

**Biochemistry (Medicinal Chemistry) (BS) LABCHMBS**

College of Liberal Arts and Sciences

*Program Description:* The science of biochemistry is about the discovery and dissemination of fundamental knowledge of the chemical substances and vital processes of living organisms. Discoveries of new drugs, the recognition and control of new pathogens, development of new catalysts for energy transformations and the production of new materials, and solutions to problems such as food production and environmental remediation depend upon a thorough grounding in this area of science. The B.S. in biochemistry with a concentration in medicinal chemistry emphasizes aspects of biochemistry that will be useful to those planning careers in medically related areas.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* A solid undergraduate education in biochemistry provides the necessary background for career paths in research, teaching, health care, chemical industries, government and other areas. Students planning careers in medicine, dentistry, pharmacy or veterinary medicine often pursue the medicinal chemistry concentration, with supporting work in biology and chemistry as the route for preprofessional training.

*Contact:*

Department of Chemistry and Biochemistry  
<http://chemistry.asu.edu>  
chmugadv@asu.edu  
PS D 102  
4809653461

**Biological Sciences (BS) LABSCBS**

College of Liberal Arts and Sciences

*Program Description:* The B.S. in biological sciences is designed for students who desire a broad background in many areas of biology or who want to postpone selection of a concentration until graduate school. Biological sciences encompasses

the study of all living things (microbes, plants and animals), and includes the study of basic organization and function (molecules, cells, tissues, organs), how organisms evolve, their roles in the natural environment, how hereditary information is transferred and the development of biotechnology.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Students graduating with this degree are broadly trained and well prepared for admission into graduate programs and professional schools (medical, dental and veterinary). They may also directly enter positions in government, education, industry or certain technical fields.

Students exploring becoming a middle or high school teacher can find more information about the concurrent degree program at [http://www.asu.edu/programs/concurrentdegrees/BAE\\_BS\\_BioSciences.html](http://www.asu.edu/programs/concurrentdegrees/BAE_BS_BioSciences.html).

*Contact:*

School of Life Sciences  
<http://sols.asu.edu/>  
[sols.advising@asu.edu](mailto:sols.advising@asu.edu)  
LSC 206  
480/727-6277

### **Biological Sciences (Animal Physiology & Behavior) (BS) LABSCABS**

College of Liberal Arts and Sciences

*Program Description:* The animal physiology and behavior concentration in the B.S. in biological sciences is intended for students interested in a broad, integrated education in the principles and mechanisms governing animal function and behavior. This concentration will prepare students for graduate-level study in physiology, neuroscience and animal behavior; professional school in health professions; or careers in basic and biomedically oriented research.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Students graduating with this degree are broadly trained and well prepared for admission into graduate programs and professional schools (medical, dental and veterinary). They may also directly enter positions in government, education, industry or certain technical fields.

*Contact:*

School of Life Sciences  
<http://sols.asu.edu/>  
[sols.advising@asu.edu](mailto:sols.advising@asu.edu)  
LSC 206  
480/727-6277

### **Biological Sciences (Biology & Society) (BS) LABSCSBS**

College of Liberal Arts and Sciences

*Program Description:* The biology and society concentration in the B.S. in biological sciences is designed to provide students with a working knowledge of life sciences and related sciences. Students gain the historical, philosophical, political and bioethical perspectives needed to explore interactions between the life sciences and related complex human issues. Subsequently, the program contributes to better-informed and more effective policymakers, teachers, writers and researchers in areas related to biology, medicine and society. To achieve this, the curriculum is highly individualized.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Our students have pursued diverse career paths. They have gone on to medical school, public health, law, environmental studies and graduate programs in such diverse areas as history and philosophy of science, genetics or counseling psychology. Other graduates work in genetic counseling, health policy and international disease studies and prevention.

*Contact:*

School of Life Sciences  
<http://sols.asu.edu/>  
[sols.advising@asu.edu](mailto:sols.advising@asu.edu)  
LSC 206  
480/727-6277

### **Biological Sciences (Conservation Biology & Ecological Sustainability) (BS) LABSCCBS**

College of Liberal Arts and Sciences

*Program Description:* The conservation biology and ecological sustainability concentration in the B.S. in biological sciences is designed to provide students with a broad background in conservation biology and ecological sustainability, while allowing them to specialize in a particular area of interest. The concentration provides for training in:

- Behavioral ecology.
- Climate change.
- Conservation of endangered species.
- Population biology.
- Urban ecology.
- Social and historical aspects of conservation.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Students graduating with this degree are broadly trained and well prepared for admission into graduate programs and veterinary school. They may also directly enter positions in:

- Government.
- Education.
- Nongovernmental organizations.
- Industry.
- Technical fields.

*Contact:*

School of Life Sciences  
<http://sols.asu.edu/>  
[sols.advising@asu.edu](mailto:sols.advising@asu.edu)  
 LSC 206  
 480/727-6277

**Biological Sciences (Ecology & Evolution) (BS) LABSCEBS**

College of Liberal Arts and Sciences

*Program Description:* The ecology and evolution concentration in the B.S. in biological sciences is designed to provide training in:

1. The ecology, evolution and behavior of organisms.
2. The diversity and systematic relationships among species and change in these relationships through time.
3. The responses of organisms and ecological systems to human activity and environmental change.

Evolution forms the foundation for understanding everything in the biological sciences, while ecology examines the interaction of organisms with their environment.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Students graduating with this degree are broadly trained and well prepared for admission into graduate programs and professional schools. They may also directly enter positions in:

- Education.
- Government.
- Industry.
- Technical fields.

*Contact:*

School of Life Sciences  
<http://sols.asu.edu/>  
[sols.advising@asu.edu](mailto:sols.advising@asu.edu)  
 LSC 206  
 4807276277

### **Biological Sciences (Genetics, Cell & Developmental Biology) (BS) LABSCGBS**

College of Liberal Arts and Sciences

*Program Description:* The genetics, cell and developmental biology concentration in the B.S. in biological sciences is intended for students interested in a flexible curriculum focused on the related fields of genetics, cell biology and developmental biology. This concentration will prepare students for careers in basic and biomedically oriented research or postbaccalaureate education in the health professions.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Students graduating with this degree are well prepared for admission into graduate programs and professional schools (medical, dental and veterinary). They may also directly enter positions in:

- Education.
- Government.
- Industry.
- Technical fields.

*Contact:*

School of Life Sciences  
<http://sols.asu.edu/>  
[sols.advising@asu.edu](mailto:sols.advising@asu.edu)  
LSC 206  
480/727-6277

### **Biological Sciences (Genomics & Bioinformatics) (BS) LABSCBBS**

College of Liberal Arts and Sciences

*Program Description:* The genomics and bioinformatics concentration in the B.S. in biological sciences is intended for students interested in a flexible curriculum focused on modern genome science. This concentration will prepare students for careers in basic and biomedically oriented research or professional training in the health professions.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Students graduating with this degree are broadly trained and well prepared for admission into graduate programs and professional schools (medical, dental and veterinary). They may also directly enter positions in:

- Education.
- Government.
- Industry.
- Technical fields.

*Contact:*

School of Life Sciences  
<http://sols.asu.edu/>  
[sols.advising@asu.edu](mailto:sols.advising@asu.edu)  
LSC 206  
480/727-6277

**Biological Sciences (Plant Biology) (BS) LABSCPBS**

College of Liberal Arts and Sciences

*Program Description:* The plant biology concentration in the B.S. in biological sciences program is designed to provide breadth for students interested in all aspects of plant biology, including:

- Anatomy.
- Cellular.
- Developmental.
- Ecology.
- Evolution.
- Evolution.
- Molecular.
- Morphology.
- Physiology.
- Systematics.

The concentration provides elective courses that permit students to further focus their education in these areas of specialization. One area is primarily for students interested in plant diversity, ecology and evolution, or other aspects of organismal biology; the other is appropriate for students interested in genetics and genomics, and cellular, molecular and developmental plant biology.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Students graduating with this degree are broadly trained and well prepared for admission into graduate programs, specimen-based collections research, and conservation and resource management agencies. They may also directly enter positions in:

- Education.
- Government.
- Industry.
- Technical fields.

*Contact:*

School of Life Sciences  
<http://sols.asu.edu/>  
[sols.advising@asu.edu](mailto:sols.advising@asu.edu)

LSC 206  
480/727-6277

### **Chemistry (BA) LACHMBA**

College of Liberal Arts and Sciences

*Program Description:* Chemistry is a central science that connects the “hard sciences,” including physics, with the “soft sciences,” such as biology and medicine, and provides fundamental knowledge needed to deal with many needs of society. Discoveries of new materials, processes and solutions to problems such as pollution control depend upon a thorough grounding in this area of science. Students in the B.A. in chemistry program have opportunities to explore interests in analytical, inorganic, organic and physical chemistry as well as biochemistry, geochemistry, solid-state and materials chemistry. A secondary education B.A. with a specialization in chemistry is also available.

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* A solid undergraduate education in chemistry provides the necessary background for many career paths in chemical industries, government and other areas. Chemistry can be combined with law for patent work, economics for sales and marketing careers, and computer science for careers in information storage and retrieval. Students planning careers in medicine, dentistry or veterinary medicine often pursue a course of study in chemistry with supporting work in biology as the route for preprofessional training.

*Contact:*

Department of Chemistry and Biochemistry  
<http://chemistry.asu.edu>  
[chmugadv@asu.edu](mailto:chmugadv@asu.edu)  
PS D 102  
4809653461

### **Chemistry (BS) LACHMBS**

College of Liberal Arts and Sciences

*Program Description:* Chemistry is a central science that connects the “hard sciences,” including physics, with the “soft sciences,” such as biology and medicine, and provides fundamental knowledge needed to deal with many needs of society. Discoveries of new materials, processes and solutions to problems such as pollution control depend upon a thorough grounding in this area of science. Students in the B.S. in chemistry program have opportunities to explore interests in analytical, inorganic, organic and physical chemistry as well as biochemistry, geochemistry, solid-state and materials chemistry. A secondary education B.A. with a specialization in chemistry is also available.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* A solid undergraduate program of education in chemistry provides the necessary background for many career paths in chemical industries, government and other areas. Chemistry can be combined with law for patent work, economics for sales and marketing careers, and computer science for careers in information storage and retrieval. Students planning careers in medicine, dentistry or veterinary medicine often pursue a course of study in chemistry with supporting work in biology as the route for preprofessional training.

Students exploring becoming a middle or high school teacher can find more information about the concurrent degree program at [http://www.asu.edu/programs/concurrentdegrees/BAE\\_BS\\_Chemistry.html](http://www.asu.edu/programs/concurrentdegrees/BAE_BS_Chemistry.html).

*Contact:*

Department of Chemistry and Biochemistry  
<http://chemistry.asu.edu>  
chmugadv@asu.edu  
PS D 102  
4809653461

**Chemistry (Environmental Chemistry) (BS) LACHMEBS**

College of Liberal Arts and Sciences

*Program Description:* Chemistry is a central science that connects the “hard sciences,” including physics, with the “soft sciences,” such as biology and medicine, and provides fundamental knowledge needed to deal with many needs of society. Discoveries of new materials, processes and solutions to problems such as pollution control depend upon a thorough grounding in this area of science. Students in the B.S. in chemistry program have opportunities to explore interests in analytical, inorganic, organic and physical chemistry as well as biochemistry, geochemistry, solid-state and materials chemistry. The environmental chemistry concentration is especially appropriate for those with strong interests in solving environmental problems.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* A solid undergraduate program of education in chemistry provides the necessary background for many career paths in chemical industries, government and other areas. Chemistry can be combined with law for patent work, economics for sales and marketing careers, and computer science for careers in information storage and retrieval. Students planning careers in medicine, dentistry or veterinary medicine often pursue a course of study in chemistry with supporting work in biology as the route for preprofessional training. Students planning to work in environmentally-related areas will find the environmental chemistry concentration especially appropriate.

*Contact:*

Department of Chemistry and Biochemistry

<http://chemistry.asu.edu>  
chmugadv@asu.edu  
PS D 102  
480/965-3461

### **Clinical Laboratory Sciences (BS) LACLSBS**

Program information not available at time of publication.

No longer accepting applications.

*Contact:*

School of Life Sciences  
<http://sols.asu.edu>  
LS E218  
sols@asu.edu  
480/965-6899

### **Communication (BA) LACOMBA**

College of Liberal Arts and Sciences

*Program Description:* The B.A. in communication focuses on teaching students how communication processes create, maintain and transform identities, relationships, workplaces and communities. Our mission statement is: "Through the study and critique of human communication, we generate knowledge, creativity and understanding to facilitate healthy relationships and workplaces, civil and secure communities and constructive intercultural interaction."

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* Graduates of our program often attend leading graduate schools in communication, law schools and business schools, and/or find gainful employment in careers in the areas of:

- Campaign management.
- Counseling.
- Entrepreneurism.
- Event planning.
- Health care management.
- Human resource management.
- Intercultural relations.
- Marketing.
- Nonprofit management.
- Public relations.
- Sales.

*Contact:*

Hugh Downs School of Human Communication

<http://humancommunication.clas.asu.edu/>  
communication@asu.edu  
STA 412  
480/965-5095

### **Communication (BS) LACOMBS**

College of Liberal Arts and Sciences

*Program Description:* The B.S. in communication program focuses on teaching students how communication processes create, maintain and transform identities, relationships, workplaces and communities. Our mission statement is: "Through the study and critique of human communication, we generate knowledge, creativity and understanding to facilitate healthy relationships and workplaces, civil and secure communities and constructive intercultural interaction."

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates of our program often attend leading graduate schools in communication, law schools and business schools, and/or find gainful employment in careers in the areas of:

- Campaign management.
- Counseling.
- Entrepreneurism.
- Event planning.
- Health care management.
- Human resource management.
- Intercultural relations.
- Marketing.
- Nonprofit management.
- Public relations.
- Sales.

#### *Contact:*

Hugh Downs School of Human Communication  
<http://humancommunication.clas.asu.edu/>  
communication@asu.edu  
STA 412  
480/965-5095

### **Computational Mathematical Sciences (BS) LACMSBS**

College of Liberal Arts and Sciences

*Program Description:* Mathematics is a crucial component in many disciplines such as physics, engineering applications, business and economics, and in the life sciences and social sciences. The B.S. in computational mathematical sciences is an interdisciplinary degree, with components in mathematics, science and computing,

and a focus on computational and numerical aspects of techniques used to solve a wide range of applied problems arising in practically any field of study.

A large component is geared towards understanding why and how computer algorithms work, as well as their limitations in terms of applicability and efficiency. This program is designed for students interested in computing and simulation of applied problems. It promotes creative skills and develops problem-solving tools needed in today's technological world.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Employment opportunities for math majors can be found in virtually all sectors of industry:

- Academia (high-school or college teacher, university professor).
- Applied math (scientific computing).
- Biotech.
- Business (actuary for bank or insurance company, operations research).
- Computer.
- Engineering.
- Government (consultant, federal and state organizations).
- Graduate school (mathematics or other fields).
- Medicine.

A B.S. in computational mathematical sciences is perhaps the most versatile of all math degrees in that it can lead to a wider choice of career paths. Many careers require a command of quantitative methods; persons qualified in mathematics hold a favorable edge in competition for job opportunities. Profiles and descriptions of jobs and career paths of actual mathematicians in a wide array of fields are published by the American Mathematical Society.

*Contact:*

School of Mathematical and Statistical Sciences

<http://math.asu.edu/>

math@asu.edu

PSA 211

4809657195

### **Earth & Space Exploration (BS) LASESBS**

College of Liberal Arts and Sciences

*Program Description:* The B.S. in earth and space exploration offers students an integrated education across earth sciences, planetary sciences, astrophysics and engineering. The degree incorporates strong quantitative preparation, a learning community that includes both science and engineering students, and a yearlong collaborative capstone senior exploration project. This strong foundation in geosciences, astrophysics and exploration engineering will prepare students for key

roles in space research and industry, environmental and geologic engineering, earth resources and exploration, and water and environmental use policy.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The earth and space exploration major addresses critical future shortfalls in the national and regional training of the next generation of geoscientists and aerospace engineers. Arizona has an expanding space industry with major new investments and is prepared to engage new technologies to monitor and understand environmental issues in Arizona, the southwest and throughout the world. Students who major in earth and space exploration will have the tools, knowledge and understanding to address key problems of a global nature, whether they are working in the private or the public sector.

*Contact:*

School of Earth and Space Exploration

<http://sese.asu.edu>

[seseinfo@asu.edu](mailto:seseinfo@asu.edu)

PS F 686

480/965-5081

### **Economics (BS) LAECNBS**

College of Liberal Arts and Sciences

*Program Description:* Economics provides a powerful platform for analyzing and answering questions such as:

- What are the best ways to design compensation schemes to attract and retain top workers while maintaining productivity?
- How does offshoring affect the economy, workers, and firms?
- Why do business cycles exist?
- What are the economic consequences of regulation?
- How should environmental safeguards be designed to simultaneously reduce pollution and maintain production efficiency?
- How should healthcare be provided to increase access and still maintain quality and encourage innovation?

Our faculty well known for both teaching excellence and high-quality research, ensuring that students receive the most current knowledge from acclaimed instructors.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Students who have sought careers following their undergraduate education have been very successful in business, consulting or government. Our graduates have taken positions as corporate economists who collect data and make forecasts concerning the nature of the firm's business; as consultants who serve as advisers to both state and federal governments as well as

private corporations and as economic analysts for banks and financial firms. Others have gone on to the best law schools in the country, or to the top Ph.D. and M.B.A. programs here and abroad. Finally, many of our graduates have won prestigious national awards, such as the Marshall Award, the NSF Fellowship, Fulbright fellowships and most recently, the Truman Award.

*Contact:*

Economics Program in CLAS  
<http://wpcarey.asu.edu/ecn>  
wpcareyecn@asu.edu  
BAC 659  
480/965-3531

**English (Creative Writing) (BA) LAENG CBA**

College of Liberal Arts and Sciences

*Program Description:* The B.A. in English offers concentrations in creative writing, linguistics or literature. Students in the creative writing concentration study and practice the art of writing poetry and fiction. The faculty in the Department of English offer courses in:

- Comparative literature.
- Creative writing.
- English as a second language
- English education.
- English linguistics, literature and language.
- Rhetoric and composition.

Students engage in community outreach and in such diverse cross-disciplinary offerings as discourses of cultural encounters, borderlands, intercultural studies and technologies. A secondary education B.A. with a specialization in English is also available.

*Language Requirement: Y | Program Fee: N*

*Admission Requirements:*

*Career Opportunities:* With a degree in English, students' career options are virtually endless. Employers in all fields are always looking for workers with strong writing and communication skills and the ability to think critically. Some of the most common professions for English majors are:

- Banking.
- Business.
- Editing.
- Journalism.
- Law.
- Medicine.

- Professional writing.
- Public relations.
- Publishing.
- Teaching.
- Web content development.

*Contact:*

Department of English  
<http://english.clas.asu.edu/>  
[englishadvising@asu.edu](mailto:englishadvising@asu.edu)  
 LL 542  
 4809653168

**English (Minor) LAARTHMIN**

Program information not available at time of publication.

Not accepting new students.

*Contact Information:*

College of Liberal Arts and Sciences  
<http://clas.asu.edu/>

**English (Linguistics) (BA) LAENGNBA**

College of Liberal Arts and Sciences

*Program Description:* The B.A. in English offers concentrations in creative writing, linguistics, or literature. Students in the linguistics concentration focus on study of the history and structure of language. The faculty in the Department of English offer courses in:

- Comparative literature.
- Creative writing.
- English as a second language.English education.
- English linguistics, literature and language.
- Rhetoric and composition.

Students engage in community outreach and in such diverse cross-disciplinary offerings as discourses of cultural encounters, borderlands, intercultural studies and technologies. A secondary education B.A. with a specialization in English is also available.

*Language Requirement: Y | Program Fee: N*

*Career Opportunities:* With a degree in English, students' career options are virtually endless. Employers in all fields are always looking for workers with strong writing and communication skills and the ability to think critically. Some of the most common professions for English majors are:

- Banking.
- Business.
- Journalism.
- Law.
- Medicine.
- Professional writing and editing.
- Public relations.
- Publishing.
- Teaching.
- Web content development.

*Contact:*

Dean, College of Liberal Arts and Sciences  
<http://english.clas.asu.edu/>  
[englishadvising@asu.edu](mailto:englishadvising@asu.edu)  
 LL 542  
 4809653168

**English (Literature) (BA) LAENGTBA**

College of Liberal Arts and Sciences

*Program Description:* The B.A. in English offers concentrations in creative writing, linguistics or literature. Students in the literature concentration study British, American and global literatures in English from the earliest writings to the present. The faculty in the Department of English offer courses in:

- Comparative literature.
- Creative writing.
- English as a second language.
- English education.
- English linguistics, literature and language.
- Rhetoric and composition.

Students engage in community outreach and in such diverse cross-disciplinary offerings as discourses of cultural encounters, borderlands, intercultural studies and technologies. A secondary education B.A. with a specialization in English is also available.

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* With a degree in English, students' career options are virtually endless. Employers in all fields are always looking for workers with strong writing and communication skills and the ability to think critically. Some of the most common professions for English majors are:

- Banking.
- Business.

- Journalism.
- Law.
- Medicine.
- Professional writing and editing.
- Public relations.
- Publishing.
- Teaching.
- Web content development.

*Contact:*

Department of English  
<http://english.clas.asu.edu/>  
[englishadvising@asu.edu](mailto:englishadvising@asu.edu)  
 LL 542  
 4809653168

**Family & Human Development (BS) LAFASBS**

College of Liberal Arts and Sciences

*Program Description:* The B.S. in family and human development offers course work on the development of individuals and families as they relate to their social worlds. The required concentration in family studies and child development provides a focus on the development of children, adults and families. Students take a wide variety of courses on contemporary issues related to human development from infancy through the end of the life span, and the development, formation and dissolution of families and develop proficiency in written communication, computer skills, statistics and research methods.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* As a liberal arts degree, the B.S. in family and human development not only provides excellent preparation for future graduate work in family and developmental sciences, social work, law, medicine and counseling, it also prepares undergraduates for direct entry into positions in business, social service and government.

*Contact:*

School of Social/Family Dynamics T  
<http://ssfd.clas.asu.edu/>  
[ssfd@asu.edu](mailto:ssfd@asu.edu)  
 SS 144  
 4809656978

**Film (Film & Media Studies) (BA) LAFMSBA**

College of Liberal Arts and Sciences

*Program Description:* The B.A. in film with a concentration in film and media studies provides students with an opportunity for interdisciplinary study of film and media. The core faculty are nationally and internationally recognized scholars, with terminal degrees from the nation's top film and media programs. Their innovative curriculum focuses on teaching students to understand how film, television, video and computer games, new media and entertainment culture represent and influence our society.

Students interested in the B.A. in film in the College of Liberal Arts and Sciences complete a concentration in film and media studies, and students accepted into the B.A. in film in the Katherine K. Herberger College of the Arts complete a concentration in film and media production. The concentrations include core courses and electives in the areas of critical studies and film production.

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* The film and media studies concentration provides undergraduates with skills that can be applied in a number of professional fields, preparing students for a variety of career opportunities as leaders within media entertainment industries, including:

- Creative management.
- Critics/Development.
- Marketing and regulation.
- Teachers.

Former students of film and media studies have gone on to pursue graduate studies at USC, UCLA, the University of Texas and Stanford. Others have selected career paths in the film, media and entertainment industries.

*Contact:*

Dean, College of Liberal Arts and Sciences

<http://film.asu.edu/major>

[filminfo@asu.edu](mailto:filminfo@asu.edu)

LL 641

480/965-6747

### **French (BA) LAFREBA**

College of Liberal Arts and Sciences

*Program Description:* Students in the B.A. in French program study the language, literature and culture of France and Francophone countries. They gain a respectable measure of competence in reading, writing, and oral/aural skills in the French language. They are required to take a number of related courses on topics such as:

- Art.
- Cultural theory.
- French history.

- Government.
- International business.
- Linguistics.
- Literary theory.
- Religion.

To help students gain proficiency in the language, the French section has an active French Club, conversation hours and film screenings. In addition ASU also offers study abroad and exchange programs in France and Quebec during the summer and academic year.

*Language Requirement: Y | Program Fee: N*

*Career Opportunities:* Graduates have a variety of career opportunities in firms that deal with international trade, U.S. companies that have branches in France, airlines, and in education or government service. Many pursue graduate work in French, eventually teaching the language and culture in universities or colleges. With state certification, high school teaching is also a possibility.

*Contact:*

School of International Letters and Cultures

<http://silc.asu.edu/undergraduate/majors-minors-certs>

[silcadvising@asu.edu](mailto:silcadvising@asu.edu)

LL 440

480/965-6281

### **Geography (BA) LAGCUBA**

College of Liberal Arts and Sciences

*Program Description:* Geographers have a unique spatial perspective in understanding the modern world, global to local, through the twin lenses of space and place. The B.A. in geography emphasizes humanistic and cultural traditions, and students pursuing undergraduate studies in geography typically concentrate knowledge-building in understanding various cultural phenomena, or in studying regions such as Latin America, Europe, Asia or Africa.

*Language Requirement: Y | Program Fee: N*

*Career Opportunities:* B.A. geographers go on to careers as:

- Community developers.
- Foreign service.Geodemographic analysts.
- Governmental organizations.Intelligence analysts.
- International trade consultants.
- Nongovernmental organizations.
- Public sector transportation planners.
- Teachers.
- Urban and regional planners.

*Contact:*

Dean, College of Liberal Arts and Sciences  
<http://geography.asu.edu/>  
geographyadvising@asu.edu  
COOR 5650  
480/965-7533

**Geography (BS) LAGCUBS**

College of Liberal Arts and Sciences

*Program Description:* Geographers have a unique spatial perspective in understanding the modern world, global to local, through the twin lenses of space and place. A B.S. in geography emphasizes spatial patterns in natural science features such as weather, water, landforms, plants, or in social science/environmental science dynamics involving human populations, economic patterns or transportation.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* With a focus on geospatial techniques, B.S. geographers go on to careers as:

- Cartographers.
- Computer cartographers.
- Environment impact analysts.
- Geographic information system (GIS) specialists and analysts.
- Geospatial software developers.
- Hydrology and water resource specialists.
- Location analysts for businesses.
- Remote sensing analysts.

Graduates are presented with a host of other geospatial career options in the burgeoning fields of geographic information science (GISci), mapping and navigation systems.

*Contact:*

School of Geographical Sciences and Urban Planning  
[http://geography.asu.edu](http://geography.asu.edu/)  
geographyadvising@asu.edu  
COOR 5650  
4809657533

**Geography (Meteorology-Climatology) (BS) LAGCUMBS**

College of Liberal Arts and Sciences

*Program Description:* The meteorology-climatology concentration under the B.S. in geography is designed to meet the requirements of certification as a meteorologist by the National Weather Service. As such, it requires a heavy concentration on:

- Dynamic meteorology (atmospheric physics).
- Mathematics (requiring three semesters of calculus).
- Physics (two semesters of university or calculus-based physics).
- Synoptic meteorology (operational weather forecasting).

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Students successfully completing the program have found employment with:

- Energy power companies (e.g., Salt River Project and Arizona Public Service).
- Government agencies (e.g., Arizona Department of Environmental Quality, U.S. Environmental Protection Agency, U.S. Army Corps of Engineers).
- Graduate work in either meteorology or climatology.
- The National Weather Service.
- U.S. Air Force (in either meteorology or pilot training).

*Contact:*

School of Geographical Sciences and Urban Planning  
<http://geography.asu.edu>  
[geographyadvising@asu.edu](mailto:geographyadvising@asu.edu)  
 COOR 5650  
 4809657533

### **Geography (Urban Studies) (BS) LAGCUUBS**

College of Liberal Arts and Sciences

*Program Description:* The urban studies concentration under the B.S. in geography is designed to facilitate the growing interest in urban areas, with special emphasis on studying the Phoenix metropolitan area and other rapidly urbanizing regions in arid climates. Tied with geographic information systems (GIS), the urban studies major brings both knowledge and skill sets together in a powerful way. This program, with its focus on GIS, is a viable alternative to the urban planning degree, which has restrictive enrollment.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Students successfully completing the program often find employment with city planning agencies, as well as government agencies at various levels, including county, state and federal levels. The urban studies major, especially when combined with a focus on GIS, gives graduates an advantage in careers in urban planning and other jobs dealing with urban issues, including transportation, economic development planning and housing issues.

*Contact:*

School of Geographical Sciences and Urban Planning  
<http://geography.asu.edu/>  
[geographyadvising@asu.edu](mailto:geographyadvising@asu.edu)

COOR 5650  
480/965-7533

### Geological Sciences (BS) LAGLGBS

College of Liberal Arts and Sciences

*Program Description:* Geological science is the study of the Earth and other planets and the processes that have shaped them since the origin of the solar system. Topics covered in geological sciences include:

- Earthquakes.
- Exploration of the sea floor.
- Fossils.
- Groundwater.
- Mountain building.
- Petroleum and ore deposits.
- Plate tectonics.
- The history of the Earth and planets.
- Volcanoes.

A B.S. in geological sciences from ASU provides students with a solid background, drawing upon the fields of chemistry, mathematics and physics. Students gain a strong understanding of field methods as well as modern computing, remote sensing and instrumentation. The modern geological scientist uses computers, satellites, high-tech instrumentation, field mapping and exploration to understand the natural environment and Earth's resources.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Geological scientists are employed in jobs that range from the preservation of the environment to the discovery of natural resources on Earth and the exploration of the solar system and beyond. They work to understand the effects of natural and human processes on Earth. Careers in geological science usually involve a combination of field work, lab and computer analysis and writing. Many geologists work in private industry in the environmental, mining and energy fields. Others hold jobs in public agencies or universities, working on natural hazards, resources, research and informing the public. Work environments can vary widely, relating to such diverse settings as the deep ocean floor and the moon and planets. Geologists have the skills and knowledge to address major issues of global importance.

*Contact:*

Department of Geological Sciences  
<http://sese.asu.edu>  
seseinfo@asu.edu  
PSF 686  
4809655081

### **German (BA) LAGERBA**

College of Liberal Arts and Sciences

*Program Description:* Students in the B.A. in German program study the language, literature and culture of Germany. They gain a respectable measure of competence in reading, writing and oral/aural skills in the German language. They are required to take a number of related courses on topics such as:

- Art.
- German history.
- Government.
- International business.
- Religion.

Students are encouraged to study abroad in Germany as participants in ASU's summer program in Regensburg, or on one of the academic-year exchange programs available at several German universities.

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* Graduates have a variety of career opportunities in firms that deal with international trade, U.S. companies that have branches in Germany, with airlines, and in other fields. Some decide to pursue graduate work, eventually teaching the language and culture in universities or colleges. With state certification, high school teaching is also a possibility.

*Contact:*

School of International Letters and Cultures

<http://silc.asu.edu/undergraduate/majors-minors-certs>

[silcadvising@asu.edu](mailto:silcadvising@asu.edu)

LL 440

480/965-6281

### **Global Health (BA) LASSHBA**

College of Liberal Arts and Sciences

*Program Description:* The B.A. in global health is an interdisciplinary degree designed for students who seek a broad and flexible set of skills for understanding contemporary health challenges and thinking about how they might best be solved. "Global" is understood in the anthropological sense, meaning ways of understanding and addressing disease, health and well-being that can incorporate all cultures, places and time, and that can integrate knowledge of health's social, historical, biological and ecological dimensions.

The curriculum emphasizes the development of core skills in critical thinking and problem solving and the importance of direct experience (research, study abroad, service learning and advocacy). The degree cultivates capacities to deal with any

complex problem with social components: how to identify the critical issues, ask the right questions and create solutions that are meaningful and effective.

*Language Requirement: Y | Program Fee: N*

*Career Opportunities:* Nationally and internationally, the health field provides enormous and varied career opportunities, and demands for graduates with skills is high and only growing. The major would support the goals of those who plan to pursue careers in academic research and teaching, and in health services, whether in universities, government agencies, departments of health, international agencies (WHO, CDC, Global Health Council, World Bank, Interamerican Development Bank), NGOs, or in private business or industry. The degree also provides those who plan advanced specialist health training, such as in nursing, medicine, dentistry or pharmacy, with a broad intellectual base that enhances later specialist training.

In reports prepared by such organizations as the Pew Health Professional Consortium and the National Commission on Allied Health, experts conclude that the best health professionals have interdisciplinary perspectives, social and cultural acuity (such as in cross-cultural settings) and team-oriented skills. In Arizona and elsewhere, there is a pressing need for professionals with appropriate skills to work in cross-cultural settings or with underserved populations (such as migrants, minorities and those living in poverty), and many of these jobs are directly or indirectly related to health. Graduates interested in pursuing research or scientific careers continue to graduate school to seek a master's or doctorate degree in fields such as:

- Anthropology.
- Applied mathematics.
- Biology.
- Demography.
- Environmental studies.
- Evolutionary biology.
- Genetics.
- Geography.
- Infectious diseases.
- Public health.
- Sociology.
- Sustainability.

*Contact:*

School of Human Evolution & Social Change  
[http://shesc.asu.edu/undergraduate\\_studies](http://shesc.asu.edu/undergraduate_studies)  
shesc.undergrad@asu.edu  
SHESC 233  
480/965-6215

## Global Studies (BA) LASGSBA

College of Liberal Arts and Sciences

*Program Description:* The School of Government, Politics and Global Studies serves global, national and academic communities by spearheading new intellectual perspectives in which people strive to attain a higher quality of life. The school is transdisciplinary in strategy and transformational in purpose. Students pursuing the B.A. in global studies examine global issues from the perspective of an overarching theme of quality of life. Students organize their program of study by selecting a track. Students may choose a track in one of the following:

- Development.
- Environment.
- Global governance.
- Urban systems.
- Violence, conflict and human rights.

The program is organized around key current research and teaching themes. Global studies faculty as well as affiliated faculty from throughout the university offer courses.

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* The program prepares students for professional and graduate training (including law, business and public policy) and provides professional training to future decision-makers in government, business and policy entities.

### *Contact:*

School of Government, Politics and Global Studies

<http://globalstudies.clas.asu.edu/>

globalstudies@asu.edu

WHALL 130

4807278286

## History (BA) LAHISBA

College of Liberal Arts and Sciences

*Program Description:* Students in the B.A. in history program study the growth and development of human society from all aspects—political, social, economic and cultural. Students are required to complete course work in one geographic emphasis. The department covers the history of Europe, the United States, Asia, Latin America and Africa, and courses are designed to give students both breadth and depth in understanding today's complex world.

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* History majors seek jobs in:

- Business and industry.
- Education.
- Government.

They pursue graduate study in:

- Business.
- History.
- Justice studies.
- Law.
- Medicine.
- Public administration.
- Public history.
- Theology.

History is an excellent preprofessional major for:

- Business.
- Justice studies.
- Law.
- Medicine.
- Public administration.
- Public history.
- Theology.

A high-quality record as a history major indicates to employers and admissions officers that the student has acquired a respectable degree of literacy. It also demonstrates that the student has the ability to conduct research, assimilate material, read critically and evaluate conflicting interpretations of events.

*Contact:*

School of Historical and Critical Inquiry

<http://history.clas.asu.edu>

historyadvisor@asu.edu

COOR 4587

4809658364

### **Integrated Studies (BA) LAISTBA**

College of Liberal Arts and Sciences

*Program Description:* The integrated studies program is not a General Studies major, but a unique and highly focused plan of study for gifted students whose academic interests are not served by the more traditional disciplinary studies. Superior students whose interests lie beyond the traditional departmental emphases have the opportunity to work with various faculty members in creating an individualized B.A. plan.

Students who elect an integrated studies major pursue a coherent course of study involving more than one department or college. Students majoring in integrated studies transcend the traditional disciplinary structure of the college to concentrate on individually designed areas of study not covered by the traditional major and minor.

*Language Requirement: Y | Program Fee: N*

*Admission Requirements:* Not available to freshmen. There is an additional application for this degree. Admissions consist of completion of 32 credit hours at ASU with a GPA of at least 3.25 and three letters of recommendation from ASU faculty members. For more information contact the assistant dean for academic affairs, Office of Student and Academic Programs, Fulton Center, Suite 110.

*Career Opportunities:* An integrated studies major may or may not be professionally or vocationally oriented, depending on the area of concentration. All integrated studies majors, however, share with all other liberal arts and sciences students the goal of developing analytical and communicative abilities. The program combines breadth of learning with an appropriate depth in some focused area of inquiry. Integrated studies graduates are prepared to enter the work force or pursue graduate or professional studies at the completion of their undergraduate program.

*Contact:*

Dean, College of Liberal Arts and Sciences  
[http://clas.asu.edu/undergraduate\\_studies](http://clas.asu.edu/undergraduate_studies)  
CLASUndergrad@asu.edu  
Fulton 110  
480/965-6506

### **Integrated Studies (BS) LAISTBS**

College of Liberal Arts and Sciences

*Program Description:* The integrated studies program is not a General Studies major, but a unique and highly focused plan of study for gifted students whose academic interests are not served by the more traditional disciplinary studies. Superior students whose interests lie beyond the traditional departmental emphases have the opportunity to work with various faculty members in creating an individualized B.S. plan.

Students who elect an integrated studies major pursue a coherent course of study involving more than one department or college. Students majoring in integrated studies transcend the traditional disciplinary structure of the college to concentrate on individually designed areas of study not covered by the traditional major and minor.

*Language Requirement: N | Program Fee: N*

*Admission Requirements:* Not available to freshmen. There is an additional application for this degree. Admissions consist of completion of 32 credit hours at ASU with a GPA of at least 3.25 and three letters of recommendation from ASU faculty members. For more information contact the assistant dean for academic affairs, Office of Student and Academic Programs, Fulton Center, Suite 110.

*Career Opportunities:* The integrated studies program may or may not be professionally or vocationally oriented, depending on the area of concentration. However, the program shares with all other liberal arts and science degrees the goal of developing analytical and communicative abilities. The program combines breadth of learning with an appropriate depth in some focused area of inquiry. Integrated studies graduates are prepared to enter the work force or pursue graduate or professional studies at the completion of their undergraduate program.

*Contact:*

Dean, College of Liberal Arts and Sciences  
[http://clas.asu.edu/undergraduate\\_studies](http://clas.asu.edu/undergraduate_studies)  
CLASUndergrad@asu.edu  
Fulton 110  
480/965-6506

**International Letters and Cultures (BA) LASLCBA**

College of Liberal Arts and Sciences

*Program Description:* The B.A. in international letters and cultures is a degree grounded in the study of at least one foreign language. It is a more transcultural and transdisciplinary degree than a traditional languages and literature degree and is designed to encourage students to explore and even challenge the traditional boundaries of cultures, texts and disciplines. Students choose a program of study that requires study and research in a minimum of two cultures or disciplines (or both). Students must meet with an advisor in the School of International Letters and Cultures to discuss this degree option.

*Language Requirement: Y | Program Fee: N*

*Career Opportunities:* This degree program will provide essential skills that employers in government, education and various business sectors are looking for, including proficiency in another language or languages, knowledge of other cultures, strong written and oral communication skills and valuable critical thinking and analytical skills.

*Contact:*

School of International Letters and Cultures  
<http://silc.asu.edu/undergraduate/majors-minors-certs>  
silcadvising@asu.edu  
LL 440  
480/965-6281

### **International Letters & Cultures (Classics) (BA) LASLCCBA**

College of Liberal Arts and Sciences

*Program Description:* The B.A. in International Letters and Cultures with a concentration in classics will allow students to pursue a traditional degree in classics in a non-traditional way. Students will be expected to acquire the traditional skills in the core ancient languages and history (with an emphasis in either ancient Greek or Latin language), but they will also be asked to seek out courses in several departments across the university and tailor their degree to whatever aspect of classical scholarship appeals to them. This classics degree will therefore encourage academic enterprise and intellectual and cultural diversity among individual students.

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* The reasoning, research, language, and analysis skills developed in study of the Classics are well suited for many careers, particularly in Law, Business, or Education.

*Contact:*

School of International Letters and Cultures  
silcadvising@asu.edu  
LL 440  
4809656281

### **Italian (BA) LAITABA**

College of Liberal Arts and Sciences

*Program Description:* Students in the B.A. in Italian program study the language, literature and culture of Italy. They gain a respectable measure of competence in reading, writing and oral/aural skills in the Italian language. They are required to take a number of related courses on topics such as:

- Art.
- Government.
- Italian history.
- Religion.

A summer program in Florence, Italy, is available for students who wish to study the language and culture while living in the country. There are also study abroad programs in various cities in Italy during the academic year.

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* There are numerous career opportunities for Italian graduates in art museums, firms that deal with international trade, including U.S. companies that have branches in Italy, airlines and other fields. Some graduates pursue doctoral studies, eventually teaching the language in universities or colleges.

*Contact:*

School of International Letters and Cultures  
<http://silc.asu.edu/undergraduate/majors-minors-certs>  
[silcadvising@asu.edu](mailto:silcadvising@asu.edu)  
LL 440  
480/965-6281

**Justice Studies (BS) LAJUSBS**

College of Liberal Arts and Sciences

*Program Description:* The School of Social Transformation contains an innovative social science program that places social justice at the center of its scholarship and teaching. The B.S. in justice studies is designed for students interested in studying the multiple meanings and manifestations of justice and social change, both locally and globally. Students receive interdisciplinary training in research methods and theory, and take courses that provide them with a comprehensive understanding of substantive issues within five primary research areas. These five core substantive areas are:

1. Citizenship, Migration and Human Rights.
2. Media, Technology and Culture.
3. Law, Policy and Social Change.
4. Globalization, Sustainability and Economic Justice.
5. Social Identities and Communities.

The goal is to enable students, faculty and graduates to use their skills to find solutions to complex social problems.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Many graduates go on to law school, graduate school or other professional degree programs. Students emerge from this program with the knowledge and skills designed to bring social justice concerns to their professional careers. Our graduates work in a variety of fields including law, nongovernmental organizations, human welfare agencies and other public service organizations.

*Contact:*

School of Social Transformation  
<http://sjsi.clas.asu.edu>  
[justiceinfo@asu.edu](mailto:justiceinfo@asu.edu)  
WILSN 228  
480/965-7682

**Kinesiology (BS) LAKINBS**

College of Liberal Arts and Sciences

*Program Description:* Kinesiology is a discipline emphasizing the study of movement as it relates to physical activity, health and disease prevention, exercise and sport.

Using both human and animal models and reflecting research ranging from basic to applied, it draws from an interdisciplinary body of knowledge grounded in the biological, psychological, physical and social sciences.

Undergraduate students in the program gain disciplinary knowledge of the aspects of human movement and physical activity, including:

- Anatomical.
- Biomechanical.
- Developmental.
- Physiological.
- Psychological.
- Sociological.

The department's graduate programs, at both the master's and doctoral levels, are highly regarded nationally and internationally and have a strong interdisciplinary emphasis.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* Kinesiology graduates have a wide range of career options in health and exercise performance. Some typical job paths include:

- Cardiac rehabilitation.
- Dentistry.
- Exercise equipment manufacturing.
- Medicine.
- Pharmaceutical sales.
- Pharmacy.
- Physical/occupational therapy.

*Contact:*

Department of Kinesiology  
<http://kinesiology.clas.asu.edu/>  
kinesundgrad@asu.edu  
PEBW 218  
480/965-3875

### **Mathematics (BA) LAMATBA**

College of Liberal Arts and Sciences

*Program Description:* Mathematics is a crucial component in many disciplines such as physics, engineering applications, business and economics, and the life sciences and social sciences where the need for quantification in the analysis of phenomena is strong. The B.A. in mathematics provides a general background in mathematics, at a level sufficient to improve critical thinking, rigor and problem solving skills required in certain "social" fields. The B.S. requires six more credit hours (SBS 304

Social Statistics and a political science elective) within the major than the B.A. The B.A. program has a foreign language requirement. A secondary education B.A. with a specialization in mathematics is also available.

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* Employment opportunities for math majors can be found in virtually all sectors of industry:

- Academia (high-school or college teacher, university professor).
- Applied math (scientific computing).
- Business (actuary for bank or insurance company, operations research).
- Engineering, biotech, computer, government (consultant, federal and state organizations).
- Graduate school (mathematics or other fields).
- Medicine.

Graduates with a B.A. in mathematics may pursue a master's degree in a more applied field (social sciences) or an M.B.A. and typically move on to “social” careers (social scientist, politics, education). Graduates also have the option of becoming certified and teaching mathematics in public middle schools and high schools. Many careers require a command of quantitative methods and persons qualified in mathematics hold a favorable edge in competition for job opportunities.

*Contact:*

School of Mathematical and Statistical Sciences

<http://math.asu.edu/>

math@asu.edu

PSA 211

4809657195

### **Mathematics (BS) LAMATBS**

College of Liberal Arts and Sciences

*Program Description:* Mathematics is a crucial component in many disciplines such as physics, engineering applications, business and economics, and the life sciences and social sciences where the need for quantification in the analysis of phenomena is strong. The B.S. includes more analytical courses, as well as additional advanced courses compared to the B.A. It is the most popular math degree at ASU. Many B.S. majors are dual majors in a more applied field, such as physics and engineering.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Employment opportunities for math majors can be found in virtually all sectors of industry:

- Academia (high-school or college teacher, university professor).
- Applied math (scientific computing).

- Business (actuary for bank or insurance company, operations research).
- Engineering, biotech, computer, government (consultant, federal and state organizations).
- Graduate school (mathematics or other fields).
- Medicine.

Many careers require a command of quantitative methods and persons qualified in mathematics hold a favorable edge in competition for job opportunities. Profiles and descriptions of jobs and career paths of actual mathematicians in a wide array of fields are published by the American Mathematical Society.

Students exploring becoming a middle or high school teacher can find more information about the concurrent degree program at [http://www.asu.edu/programs/concurrentdegrees/BAE\\_BS\\_Math.html](http://www.asu.edu/programs/concurrentdegrees/BAE_BS_Math.html).

*Contact:*

School of Mathematical and Statistical Sciences  
<http://math.asu.edu/>  
 math@asu.edu  
 PSA 211  
 4809657195

**Mathematics (Statistics) (BS) LAMATTBS**

College of Liberal Arts and Sciences

*Program Description:* Mathematics is a crucial component in many disciplines such as physics, engineering applications, business and economics, and in the life sciences and social sciences where the need for quantification in the analysis of phenomena is strong. The B.S. in mathematics with a concentration in statistics focuses on course work related to the statistical analysis of data and the evaluation of probabilistic models based on these data. Such models are heavily used in the banking and insurance industries, but also increasingly in more engineering fields where the effects of noise sometimes play a critical role in the behavior of the model. Many B.S. students in the statistics concentration are dual business or economics majors.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Employment opportunities for math majors can be found in virtually all sectors of industry:

- Academia (high-school or college teacher, university professor).
- Applied math (scientific computing).
- Business (actuary for bank or insurance company, operations research).
- Engineering, biotech, computer, government (consultant, federal and state organizations).
- Graduate school (mathematics or other fields).

- Medicine.

A course of study in statistics is especially useful in technical positions in finance, insurance, business, as well as in fields where data analysis plays an important role, such as genomics. Graduates also have the option of becoming certified and teaching mathematics in public middle schools and high schools. Many careers require a command of quantitative methods and persons qualified in mathematics hold a favorable edge in competition for job opportunities.

*Contact:*

School of Mathematical and Statistical Sciences

<http://math.asu.edu/>

math@asu.edu

PSA 211

4809657195

**Microbiology (BS) LAMICBS**

College of Liberal Arts and Sciences

*Program Description:* Students in the B.S. in microbiology program engage in the study of microorganisms (bacteria, viruses, fungi) and their activities, including their impact on humans, animals and the environment. Several basic and applied subdisciplines are included:

- Biodegradation.
- Food and pharmaceutical microbiology, including quality control.
- Immunology, which involves the study of immune defense mechanisms.
- Industrial microbiology and biotechnology.
- Medical and clinical microbiology, which concerns microbes that cause infectious diseases.
- Microbial fermentation, which involves growing microorganisms to make chemicals, antibiotics and other economically important products.
- Microbial genetics.
- Microbial physiology and biochemistry.
- Molecular biology.
- Mycology, which is the study of fungi.
- Recombinant DNA technology.
- Soil and aquatic microbiology.
- Virology.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Microbiology (including biotechnology and molecular biology) is a rapidly developing science with career opportunities in industrial, governmental, hospital-clinic and academic environments. Graduates work in:

- Clinical applications.

- Education.
- Production and testing of microbial products and quality control.
- Public health and environmental microbiology.
- Research and development.

*Contact:*

School of Life Sciences  
<http://sols.asu.edu/>  
[sols.advising@asu.edu](mailto:sols.advising@asu.edu)  
 LSC 206  
 4807276277

**Molecular Biosciences/Biotechnology (BS) LAMBBBS**

College of Liberal Arts and Sciences

*Program Description:* Students in the B.S. in molecular biosciences and biotechnology program focus on learning the fundamentals of:

- Biochemistry.
- Cell biology.
- Molecular genetics.
- Organismal structure and function.
- Physiology.

Students then apply these principles in research settings to discover more about the causes of disease and how organisms develop and respond to environmental changes. Special emphasis is devoted to understanding how these principles are applied by the biotechnology industry to improve the quality of life through the production of better and healthier foods with lower environmental impact and the treatment of illness and disease.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates of the molecular biosciences and biotechnology program are prepared for admission into strong graduate and professional schools or may assume positions in education, government and technical fields, and are especially well prepared for careers in biotechnology. This program will provide a foundation for modern medical research and practice, plant research, pharmacology and gene discovery. Explosive growth in the biotechnology industry recently has resulted in a substantial increase in the number of employment opportunities for majors in molecular biosciences and biotechnology.

*Contact:*

School of Life Sciences  
<http://sols.asu.edu/>  
[sols@asu.edu](mailto:sols@asu.edu)

LSE 218  
4809656899

### **Philosophy (BA) LAPHIBA**

College of Liberal Arts and Sciences

*Program Description:* A B.A. in philosophy offers a unique course of study. As the American Philosophical Association says, "Philosophy is quite unlike any other field...it is a reasoned pursuit of fundamental truths, a quest for understanding, a study of principles of conduct. It seeks to establish standards of evidence, to provide rational methods of resolving conflicts and to create techniques for evaluating ideas and arguments. Philosophy develops the capacity to see the world from the perspective of other individuals and other cultures; it enhances one's ability to perceive the relationships among the various fields of study; and it deepens one's sense of the meaning and varieties of human experience."

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* The analytical, rhetorical and writing skills developed through the study of philosophy provide ideal preparation for a wide range of careers, including:

- Business.
- Education.
- Journalism.
- Law.

*Contact:*

School of Historical and Critical Inquiry  
<http://www.asu.edu/clas/philosophy/>  
scott.scheall@asu.edu  
COOR 3309  
480/965-3394

### **Physics (BS) LAPHYBS**

College of Liberal Arts and Sciences

*Program Description:* Physics is concerned with the nature, structure and interactions of matter and radiation. Students in the B.S. in physics program may pursue one of two options:

1. The traditional "professional" physics program, which is selected by a majority of our majors, particularly those who plan to pursue graduate work in physics.
2. The interdisciplinary physics program, which provides a strong physics core but also includes courses in a secondary area of concentration, such as materials science, applied mathematics, physical chemistry, geophysics or astronomy

Students also have the option of building a program that combines physics with business, journalism, law, premedical or other areas.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The broad range of applicability of the principles of physics gives the physicist great flexibility in a choice of career or further education. About half of the graduates with a bachelor's degree in physics go on to graduate school in physics, engineering, astronomy, medicine and other fields. The other half go directly into employment in areas such as engineering, materials science, education and business.

Students exploring becoming a middle or high school teacher can find more information about the concurrent degree program at [http://www.asu.edu/programs/concurrentdegrees/BAE\\_BS\\_Physics.html](http://www.asu.edu/programs/concurrentdegrees/BAE_BS_Physics.html).

*Contact:*

Department of Physics  
<http://physics.asu.edu>  
[physics.info@asu.edu](mailto:physics.info@asu.edu)  
PSF 470  
480/965-3561

### **Political Science (BA) LAPOSBA**

College of Liberal Arts and Sciences

*Program Description:* The B.A. in political science offers students the necessary skills and knowledge to participate effectively as citizens in a democratic political system and to flourish in the rapidly developing globalization of the world's political institutions, cultures and economies. The major aims to provide students with the tools and skills necessary to make connections linking theory with real world problems and issues.

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* Many of our graduates have gone on to some of the country's most prestigious graduate programs and schools. Graduating seniors have also found a range of employment opportunities in:

- Communication.
- Education.
- Journalism.
- Law.
- Politics.
- Public service.

In fact, some of our graduating seniors have been hired to work at the Federal Reserve, the Arizona governor's office, local and national newspapers, multinational corporations, state and local government and the judiciary.

*Contact:*

School of Government, Politics and Global Studies

<http://www.asu.edu/clas/polisci>

COOR 6797

4809656551

**Political Science (BS) LAPOSBS**

College of Liberal Arts and Sciences

*Program Description:* The B.S. in political science offers students the necessary skills and knowledge to participate effectively as citizens in a democratic political system and to flourish in the rapidly developing globalization of the world's political institutions, cultures and economies. The major aims to provide students with the tools and skills necessary to make connections linking theory with real world problems and issues.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Many of our graduates have gone on to some of the country's most prestigious graduate programs and schools. Graduating seniors have also found a range of employment opportunities in the fields of:

- Communication.
- Education.
- Journalism.
- Law.
- Politics.
- Public service.

In fact, some of our graduating seniors have been hired to work at the Federal Reserve, the Arizona governor's office, local and national newspapers, multinational corporations, state and local government and the judiciary.

*Contact:*

School of Government, Politics and Global Studies

<http://www.asu.edu/clas/polisci>

COOR 6797

4809656551

**Pre-Health/Pre-Med Professions (BNODEG) LAMEDPRE**

College of Liberal Arts and Sciences

*Program Description:* Students who are interested in pursuing a medical, dental or other health career can major in any area they wish, as long as they fulfill the

particular professional school's prerequisite requirements. Successful applicants have majored in such diverse fields as:

- Art
- Biology
- Chemistry
- Economics
- Engineering
- Music
- Psychology

The College of Liberal Arts and Sciences health career services office provides ongoing academic career advising for pre-health students who wish to pursue a career in:

- Chemistry
- Medicine
- Optometry
- Pharmacy
- Physical therapy
- Podiatry

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* Students must meet the admission requirements of the major to which they apply.

*Career Opportunities:* The health career services office is devoted to helping students make important decisions about their futures and assisting them with the technical aspects of the application process for professional health programs. The very competitive nature of admission to these programs makes it essential for students to work closely with the office from the beginning of their studies at ASU.

*Contact:*

Dean, College of Liberal Arts and Sciences  
<http://prehealth.asu.edu/>  
prehealth@asu.edu  
FULTN 110  
480/965-2365

### **Pre-Law (BNODEG) LALAWPRE**

College of Liberal Arts and Sciences

*Program Description:* This program is designed for students interested in pursuing a legal career. Law school admission policies do not favor one major over another, provided the pre-law student's chosen major requires substantive course work. Instead of recommending a single program, the Association of American Law Schools suggests that an undergraduate education develop certain skills, qualities,

knowledge and insights essential to the law student and ultimately to the profession. At the point that the student is ready to take the LSAT and begin the application process, he or she is encouraged to meet with a pre-law professional either in the student's major or in the Office of Student and Academic Programs.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* Pre-law advisors can help students make important decisions about their futures and assist them with the technical aspects of the application process for law school programs.

*Contact:*

Dean, College of Liberal Arts and Sciences

<http://prelaw.asu.edu/>

[clasundergrad@asu.edu](mailto:clasundergrad@asu.edu)

FULTN 110

4809656506

### **Psychology (BA) LAPGSBA**

College of Liberal Arts and Sciences

*Program Description:* Psychologists study behavior, emotions and mental processes. The B.A. in psychology is designed to prepare students to work in a variety of settings that provide opportunities to apply concepts and principles of psychology. Students in the B.A. program acquire knowledge and skills related to such fascinating topics as:

- How do children develop?
- How do people remember information over long periods of time?
- How do the mind and body react to stress?
- How can people use social influence to increase compliance?
- Which types of treatments are most effective for individuals who are depressed?

In addition, B.A. majors learn about statistics and research methods and use elective courses to develop skill sets in diverse settings, including the department's child development facilities.

*Language Requirement: Y | Program Fee: N*

*Career Opportunities:* This degree provides students with a broad range of highly marketable skills, including analytical skills, writing and public speaking skills and teamwork and leadership skills, as well as valuable computer skills leading to many career opportunities. To practice psychology, advanced degrees are required in:

- Clinical.
- Developmental.
- Experimental.

- Cognitive systems.
- Behavior.
- Behavioral neuroscience.
- Social psychology.

This degree also leads to professional postgraduate programs in the fields of law and medicine.

*Contact:*

Department of Psychology  
<http://psychology.clas.asu.edu/>  
 psych.advisor@asu.edu  
 PSY 255  
 4809657258

**Psychology (BS) LAPGSBS**

College of Liberal Arts and Sciences

*Program Description:* Psychology is the study behavior, emotions and the mental processes of individuals and groups, approached through a scientific methodology. The B.S in psychology is designed to prepare students to pursue graduate work in psychology and related fields. Students in the B.S. program are exposed to theories and research addressing such fascinating topics as:

- How do children develop?
- How do people remember information over long periods of time?
- How do the mind and body react to stress?
- How can people use social influence to increase compliance?
- Which types of treatments are most effective for individuals who are depressed?

In addition, B.S. majors take advanced course work in statistics, and receive hands-on research experience by working with faculty members in the laboratory.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* This degree prepares students to pursue graduate degrees in psychology and cognate fields such as counseling, social work and family therapy. To practice psychology, advanced degrees are required in:

- Clinical.
- Developmental.
- Experimental.
- Cognitive systems.
- Behavior.
- Behavioral neuroscience.
- Social psychology.

Opportunities exist for professionals who complete advanced degrees in academic and clinical settings.

*Contact:*

Department of Psychology  
<http://psychology.clas.asu.edu/>  
psych.advisor@asu.edu  
PSY 255  
480/965-7258

**Religious Studies (BA) LARELBA**

College of Liberal Arts and Sciences

*Program Description:* Students in the B.A. in religious studies program engage in the comparative, cross-cultural study of religions and cultures. Employing various disciplinary approaches, including the historical, sociological, anthropological and theological, the academic study of religion seeks to interpret, analyze and evaluate the nature and role of religion in the lives of individuals and societies. The Department of Religious Studies enjoys an excellent national reputation and is distinctive at ASU because the relatively small number of majors allows undergraduates to receive individual faculty attention, which is often not possible in larger departments.

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* A degree in religious studies provides a strong liberal arts background and excellent training in critical thinking and writing. Such a liberal education, which includes the development of basic intellectual skills, has become increasingly attractive to employers seeking to hire recent college graduates. Students with a degree in religious studies are also well positioned to pursue graduate studies in the liberal arts and professional programs, including business, law, journalism and social work.

*Contact:*

School of Historical and Critical Inquiry  
[http://www.asu.edu/clas/religious\\_studies/](http://www.asu.edu/clas/religious_studies/)  
religious.studies@asu.edu  
ECA 377  
480/965-7145

**Russian (BA) LARUSBA**

College of Liberal Arts and Sciences

*Program Description:* Students in the B.A. in Russian program study the language, literature and culture of Russia. They gain a respectable measure of reading, writing and oral/aural skills in the Russian language, engaging in:

- Art.

- Government.
- History.
- International business.
- Linguistics.
- Literary and cultural theory.
- Literature.
- Religion.

The Russian language program also cooperates with other related units within the university (e.g., the Melikian Center for Russian, Eurasian and East European Studies) to offer a Russian and East European Studies Certificate (REESC).

Students may also take summer intensive courses in Macedonian, Albanian, Armenian, Serbo-Croatian, Tatar and Polish through the Critical Language Institute at ASU.

A study abroad program is offered in Macedonia, and advanced Russian language students may study in Moscow and St. Petersburg during the summer.

*Language Requirement: Y | Program Fee: N*

*Career Opportunities:* Graduates have a variety of career opportunities. At present these graduates have an enviable record of postgraduate placement in the job market. Many work for firms that deal with international trade or for U.S. companies that have branches in Russia, and many find positions within government service or in teaching. A few pursue graduate work in Russian studies, eventually teaching the language and/or culture in universities or colleges.

*Contact:*

School of International Letters and Cultures  
<http://silc.asu.edu/undergraduate/majors-minors-certs>  
[silcadvising@asu.edu](mailto:silcadvising@asu.edu)  
 LL 440  
 480/965-6281

### **Sociology (BS) LASOCBS**

College of Liberal Arts and Sciences

*Program Description:* Sociology is the study of social life, social change and the social causes and consequences of human behavior. The B.S. in sociology trains students in written communication, computer skills, statistics and research methods, and offers a wide variety of substantive courses on contemporary social issues ranging from crime to population trends, and courses on social institutions, such as the family, education and religion.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* An undergraduate degree in sociology not only provides excellent preparation for future graduate work in sociological research, social work, law, medicine, and counseling, it also prepares undergraduates for direct entry into positions in business, social service and government.

*Contact:*

School of Social/Family Dynamics T  
<http://ssfd.clas.asu.edu/>  
ssfd@asu.edu  
SS 144  
480/965-6978

### **Spanish (BA) LASPABA**

College of Liberal Arts and Sciences

*Program Description:* Students in the B.A. in Spanish program have the opportunity to gain oral, reading, speaking and written proficiency in the language. The program offers two study tracks from which to choose: literature and culture or Spanish linguistics. The literature and culture track provides an in-depth understanding of the themes of Spanish and Latin American culture and literature and the contemporary issues throughout the Spanish-speaking world

The Spanish linguistics track provides an in-depth understanding of the Spanish language (syntax, morphology) and may include courses in translation (English/Spanish). Students are encouraged to contact a School advisor to discuss the two available tracks. ASU offers opportunities throughout the year to study in Spain, Mexico and other Spanish-speaking countries through study abroad and exchange programs. Students majoring in Spanish may also work toward a professional certificate in Spanish/English translation.

*Language Requirement: Y | Program Fee: N*

*Career Opportunities:* Graduates may choose from several career options:

- College or university teaching and research in linguistics or literature through advanced degrees.
- Become certified to teach high school.
- Translation or interpretation studies.

Graduates may combine Spanish with other fields with an international emphasis, such as:

- Business.
- Engineering.
- Journalism.
- Political science.

*Contact:*

School of International Letters and Cultures  
<http://silc.asu.edu/undergraduate/majors-minors-certs>  
silcadvising@asu.edu  
LL 440  
480/965-6281

**Speech & Hearing Science (BS) LASHSBS**

College of Liberal Arts and Sciences

*Program Description:* Students in the B.S. in speech and hearing science program study the normal aspects of the communication process. Emphasis is placed on:

- Speech, language and hearing science.
- Anatomy and physiology of the hearing mechanism.
- The human communication system, including normal development of speech and language.

Graduates attain broad-based knowledge in the basic aspects of speech, language and hearing sciences, which prepares them for graduate studies in audiology or speech language pathology.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Employment opportunities for those with a B.S. may include positions as research assistants/associates in behavioral disciplines, management trainees or speech-language pathology assistants. Primarily, a degree in this field prepares the student for entrance into a graduate program in speech-language pathology (SLP) or audiology. In both fields, a graduate degree is required for employment.

The undergraduate degree in speech and hearing science is also excellent preparation for those who wish to enter other professional graduate programs such as:

- Education.
- Law.
- Medicine.
- Rehabilitation.
- Special education.
- Teaching for the deaf.

Graduates in SLP and audiology can work in a variety of settings from schools to hospitals and clinics.

*Contact:*

Department of Speech and Hearing Science  
<http://shs.asu.edu/>

shsinfo@asu.edu  
COOR 2211  
480/965-2374

**Transborder Chicana/o & Latina/o Studies (Media, Literature and Arts) (BA)**  
**LATCLMBA**

College of Liberal Arts and Sciences

*Program Description:* The department enjoys great faculty strengths in this area. Its media focus includes cinematography, film production, video and electronic communication, performance art, cultural and literary studies and long-distance learning and development. This area will prepare students with critical, analytical and some technical skills, as well as the theoretical underpinnings of the use of media for human communication within the context of transnational and transborder processes.

Simultaneously, the literary and creative study of the major works and canons in Chicana/o, Latina/o, Mexican and Latin American corpora provide the academic templates for understanding the emotive and psychological basis of identity and cultural change of border and transnational populations. Literary and artistic works are templates of creativity from whence broader discussions of theory, history and multiple identities emerge ensconced within broad criticisms situated in transcultural settings.

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* The bachelor's program in transborder Chicana/o and Latina/o studies prepares ASU graduates for career opportunities in a variety of national and international fields, including:

- Business fields.
- Communication.
- Education.
- Health services.
- Justice studies.
- Public policy and administration.

Transborder Chicana/o and Latina/o majors will also be well prepared to enter graduate study in such high need career fields as:

- Business.
- Education.
- Law.
- Medicine.
- Public health.
- Social work.

*Contact:*

Dept of Transborder Chicana/o & Latina/o Studies

<http://transborder.clas.asu.edu>

[tcls.info@asu.edu](mailto:tcls.info@asu.edu)

COOR 6633

480/965-5091

**Transborder Chicana/o & Latina/o Studies (Transborder Community Development and Health) (BA) LATCLTBA**

College of Liberal Arts and Sciences

*Program Description:* The B.A. in transborder Chicana/o and Latina/o studies is an interdisciplinary degree program whose central mission is to provide a value added environment that increases the direct participation of Chicana/o and Latina/o populations in the formation of human and capital development. By developing a program of social science research and teaching with an emphasis on community development and health, students will concentrate on patterns of physical, mental and social health disparities closely associated with poverty, limited access to insurance, reliance on emergency measures and facilities and differential healthcare, as well as learn how to develop the appropriate mitigating applied programs. Other major orientations with an applied focus will include:

- Environmental home health.
- Vulnerable population's well being through the life cycle.
- Work and labor accidents.
- Ecological and environmental degradation.
- Epidemiological trends and issues of Mexican origin and Latina/o populations.

The department enjoys the presence of one medical anthropologist and we will in the very near future search for one more person in a medically-oriented social science or policy area. Deeply embedded within local and transborder communities, methodological instruction and skills will be especially stressed.

Majors are expected to fulfill the college's language requirement in Spanish. In addition, all majors must demonstrate proficiency in Spanish by passing an upper-division transborder Chicana/o and Latina/o course taught in Spanish.

*Language Requirement: Y | Program Fee: N*

*Career Opportunities:* The bachelor's program in transborder Chicana/o and Latina/o studies prepares ASU graduates for career opportunities in a variety of national and international fields, including:

- Business fields.
- Communication.
- Education.

- Health services.
- Justice studies.
- Public policy and administration.

Transborder Chicana/o and Latina/o majors will also be well prepared to enter graduate study in such high need career fields as:

- Business.
- Education.
- Law.
- Medicine.
- Public health.
- Social work.

*Contact:*

Dept of Transborder Chicana/o & Latina/o Studies  
<http://transborder.clas.asu.edu>  
[tcls.info@asu.edu](mailto:tcls.info@asu.edu)  
 COOR 6633  
 480/965-5091

**Transborder Chicana/o & Latina/o Studies (US and Mexican Regional Immigration Policy & Economy) (BA) LATCLUBA**

College of Liberal Arts and Sciences

*Program Description:* The B.A. in transborder Chicana/o and Latina/o studies is an interdisciplinary degree program whose central mission is to provide a value added environment that increases the direct participation of Chicana/o and Latina/o populations in the formation of human and capital development. This concentration has a strong applied orientation and focuses on the regional and transnational policies and practices that have led to enormous demographic changes in:

1. The borderlands of the immediate U.S.-Mexico border region, where close to 12 million people live.
2. The entire country, with a total of 20.6 million people of Mexican origin, born in or migrated to the United States.

Our focus concerns the manner in which economic and political decisions between Mexico and the United States, as well as other transnational policies concerning other countries, strongly influence the present state of human migration, ecological conditions, economic policy towards trade, demographic transitions and the nexus of relations that are established across borders at local, regional and transborder levels.

We will focus primarily on the U.S.-Mexico region but transnational economics and political policies have, and will continue to, affect the manner in which Spanish-speaking Caribbean, and Central and South American regions respond. We will pay

special attention to those policies concerning trade, agriculture, manufactured and assembled goods, and such major policies as NAFTA and CAFTA.

Majors are expected to fulfill the college's language requirement in Spanish. In addition, all majors must demonstrate proficiency in Spanish by passing an upper-division transborder Chicana/o and Latina/o studies course taught in Spanish.

*Language Requirement: Y | Program Fee: N*

*Career Opportunities:* The bachelor's program in transborder Chicana/o and Latina/o studies prepares ASU graduates for career opportunities in a variety of national and international fields, including:

- Business fields.
- Communication.
- Education.
- Health services.
- Justice studies.
- Public policy and administration.

Transborder Chicana/o and Latina/o majors will also be well prepared to enter graduate study in such high need career fields as:

- Business.
- Education.
- Law.
- Medicine.
- Public health.
- Social work.

*Contact:*

Dept of Transborder Chicana/o & Latina/o Studies

<http://transborder.clas.asu.edu>

[tcls.info@asu.edu](mailto:tcls.info@asu.edu)

COOR 6633

480/965-5091

### **Urban Planning (BSP) ARPUBSP**

College of Liberal Arts and Sciences

*Program Description:* Urban planners guide communities in making wise decisions about their use of land and resources. The B.S.P. in urban planning program offers students expertise in both the analysis and the synthesis of the physical, social, political and economic issues that shape urban and regional development. Students take courses that include:

- Comprehensive planning, socioeconomic and environmental analysis.

- Computer and analytical methods.
- Planning law.
- Public-policy formulation and administration.
- Site planning.
- Urban design.

Planning includes:

- Computer and research methods.
- Environmental impact assessment.
- Geographic information systems.
- Housing.
- Landscape architecture and urban design.
- Planning and zoning law.
- Public policy formulation and administration.
- Transportation.
- Urban and development economics.
- Utilities.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students are admitted to the major, but must pass a degree milestone to continue in the major at the end of the first year.

*Career Opportunities:* Graduates in planning pursue career opportunities with private planning firms and governmental planning agencies. Some planners elect to pursue graduate degrees to develop specialty skills and to enhance their opportunities for career advancement.

*Contact:*

School of Geographical Sciences and Urban Planning  
<http://design.asu.edu/planning>  
[design.advising@asu.edu](mailto:design.advising@asu.edu)  
 CDN 162  
 480/965-7167

### **Women & Gender Studies (BA) LAWSTBA**

College of Liberal Arts and Sciences

*Program Description:* The B.A. in women and gender studies offers a comprehensive program of study that empowers students to make a difference in the world. Through the study of history, culture, literature, politics, film, science and economics, students learn to challenge conventional wisdom about gender and learn new ways of viewing the world. Internship and leadership opportunities in business, government and nonprofit organizations, for example, allow students to pursue career goals.

*Language Requirement: Y | Program Fee: N*

*Career Opportunities:* The interdisciplinary women and gender studies program prepares students for many different career opportunities upon graduation. Graduates have created businesses, worked in nonprofit organizations and agencies serving women and girls, become lawyers and teachers and worked in policy and government. They have become consultants and counselors and secured careers in public relations. Our graduates are also well prepared for graduate and law school and have been admitted to prestigious programs.

*Contact:*

School of Social Transformation

<http://wgs.asu.edu>

[wgs.asutempe@asu.edu](mailto:wgs.asutempe@asu.edu)

WHALL 205

480/965-2358

## **New College of Interdisciplinary Studies**

### **American Studies (BA) ASAMSBA**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The B.A. in American studies within the New College of Interdisciplinary Arts and Sciences enables students to look at the experiences of North Americans and their environment from a variety of historical and contemporary perspectives. Courses are grouped into four emphases:

- American systems, dealing with political, economic, religious and legal institutions.
- American cultures, concentrating on systems of belief and their symbolic expression in literature, art, philosophy and regional and popular cultures.
- American lives, exploring the ways in which categories of race, ethnicity, class and gender intersect with individual and community experience.
- Writing, stressing critical writing skills and training students to pursue careers in which writing is a major activity. Students learn to think and write critically, to conduct research, and to appreciate the changing and diverse nature of American life. Students determine appropriate programs of study in consultation with department academic advisors.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* Graduates are well equipped to embark on a wide variety of careers in government, education, business, museum and foundation work, journalism and other forms of professional writing, and in other areas where these capabilities are highly valued and sought. The program also serves as excellent preparation for law school and for graduate programs in fields such as American

studies, English, journalism, history and art history. Ideally suited to careers in which research, analysis and planning play a central role.

*Contact:*

Division of Humanities, Arts, and Cultural Studies  
[http://newcollege.asu.edu/programs/amer\\_studies/](http://newcollege.asu.edu/programs/amer_studies/)  
harcs.dept@asu.edu  
FAB N290  
602/543-4444

**Applied Computing (BS) ASACOBS**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The B.S. in applied computing within the New College of Interdisciplinary Arts and Sciences prepares students to collect and analyze data; allow for efficient, effective and ethical user interaction with computer systems; apply skills to lead the development of technology systems; engage in creative efforts; and develop and assure quality and value of information.

The program has both a technical component, concerned with the design and use of appropriate systems and technologies, and a social sciences component, concerned with understanding how people seek, obtain, evaluate, use and categorize information. Students receive a solid foundation in mathematics, technology and social sciences. Students can also choose one of three concentrations within the major: database systems, digital media and graphic design and networking and distributed processing.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Students are prepared to integrate technology with human activities and to respond to global changes, solve problems and create and manage the technological production of information and creative products. Core information technology industries are among the fastest growing sectors in the U.S. economy. Graduates will find employment opportunities with corporations and businesses, nonprofit and government agencies, digital arts media industries and in the academic world.

*Contact:*

Department of Mathematical Sciences & Appld Comptg  
[http://newcollege.asu.edu/programs/app\\_comp/](http://newcollege.asu.edu/programs/app_comp/)  
MNS.Dept@asu.edu  
CLC C217  
602/543-6050

**Applied Mathematics (BS) ASMATBS**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The B.S. in applied mathematics offers an interdisciplinary degree providing students with a broad and rigorous foundation in applied mathematics. The program emphasizes an education in quantitative problem solving and critical thinking through a survey of courses exposing students to a wide variety of mathematical theories, techniques and applications that are currently used by analysts and researchers in government, industry and nonprofit organizations. Students will also do a capstone project involving real-world problems under the supervision of an adviser and in close consultation with an external project sponsor.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Students graduating with a B.S. in applied mathematics have a wide range of career options in industry, finance, government, nonprofit organizations and education, as well as advanced degrees in the mathematical sciences (mathematics, statistics, and computer science). Based on students' career interests they may enroll in degree tracks to help guide the students' choice of courses, such as:

- Operations research.
- Financial mathematics.
- Mathematical biology.
- Applied mathematical networks.
- General applied mathematics.

*Contact:*

Department of Mathematical Sciences & Appld Comptg  
<http://newcollege.asu.edu/>

### **Applied Science (BAS) ASBASBAS**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The B.A.S. program within the New College of Interdisciplinary Arts and Sciences combines the technical concentration knowledge earned in the student's Associate of Applied Science degree with a broader education gained at the bachelor's level of education. Included in the program of study is an area of concentration (using an approved West campus minor or creating a concentration that is completely individualized) unique to their own interests and career pursuits. For example, the area of concentration can include, but is not limited to:

- Business.
- Communication.
- Criminal justice and prelaw.
- Education and teaching.
- Environmental issues and physical sciences.
- Languages and cultures.
- Social sciences and policy issues.

The applied science program is capped with an internship experience.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students applying to this program must have completed an Associate of Applied Science (A.A.S.) degree. Not available for freshmen.

*Career Opportunities:* Emphasizing professional study combined with a specific area of concentration (e.g., business, communication studies, English, gerontology, history, psychology or pre-law), students tailor their programs to meet individualized career goals. The capstone internship program prepares students to make the transition smoothly to post baccalaureate employment in business, cultural, educational, community and human service settings, as well as to graduate school. Students planning graduate or professional degrees in law, business, social sciences, helping professions, or in traditional disciplines benefit from the flexibility of this program for a broad range of future academic and career pursuits.

*Contact:*

Division of Humanities, Arts, and Cultural Studies  
[http://newcollege.asu.edu/programs/app\\_science/harcs.dept@asu.edu](http://newcollege.asu.edu/programs/app_science/harcs.dept@asu.edu)  
FAB N290  
602/543-4444

### **Communication Studies (BA) ASCOMBA**

New College of Interdisciplinary Arts and Sciences

*Program Description:* Communication studies is an extensive field involving the exploration of messages and their various meanings. Such exploration occurs in countless ways, including the study of messages between individuals in relationships, between employees in organizations, between media and their respective publics, between social institutions and their constituents and between members of different cultures. The B.A. prepares students to work in communication environments such as training, human resources management and media relations.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Communication studies is a broadly based discipline that trains individuals to speak and write competently, to manage relationships well, to effectively problem solve, and to understand the role and function of communication in public forums, organizational settings, relational exchanges and intercultural situations. Because these skills are crucial to many professions, communication studies graduates work in a variety of fields including:

- Customer service and customer relations.
- Education.
- Legal professions.

- Management.
- Media and public relations.
- Personnel.
- Sales and marketing.
- Training and development.

*Contact:*

Division of Social and Behavioral Sciences - W

[http://newcollege.asu.edu/programs/comm\\_studies/](http://newcollege.asu.edu/programs/comm_studies/)

SBS.Dept@asu.edu

FAB N251

602/543-6058

**Communication Studies (BS) ASCOMBS**

New College of Interdisciplinary Arts and Sciences

*Program Description:* Communication studies is an extensive field involving the exploration of messages and their various meanings. Such exploration occurs in countless ways, including the study of messages between individuals in relationships, between employees in organizations, between media and their respective publics, between social institutions and their constituents and between members of different cultures. The B.S. prepares students to work in communication-rich environments such as training, human resources management and media relations. It also readies graduates to perform various forms of data analysis, communication assessment and technical reporting.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The program prepares students for advanced education; advancement toward careers in teaching, counseling, law and medicine; and various careers, including:

- Advertising.
- Customer relations.
- Fundraising.
- Health and human services.
- Human resources.
- International service.
- Lobbying.
- Mediation.
- Ministry.
- Public administration.
- Public advocacy.
- Public office.
- Public relations.
- Research.

- Speech writing.
- Training and development.

*Contact:*

Division of Social and Behavioral Sciences - W  
[http://newcollege.asu.edu/programs/comm\\_studies/](http://newcollege.asu.edu/programs/comm_studies/)  
 SBS.Dept@asu.edu  
 FAB N251  
 6025436058

**English (BA) ASENGBA**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The primary mission of the program is undergraduate education. Graduates should be able to write clearly and effectively, to think critically and to construct well-supported rational arguments. They should gain an awareness of genre, should be able to take a critical approach to texts and should learn to shape their discourse to suit their intended audience.

The program, in its thematic cluster design, provides students with a balanced overview of major literature in the English language—major authors, regional and ethnic literatures and writing by women—and an awareness of the role of literary discourse in broader social and historical contexts.

The program stresses both the formal aesthetic qualities of texts and issues of class, gender, race and ethnicity relating to literary representation. It provides students a familiarity with standard literary critical terminology and an awareness of a variety of theoretical approaches to literary study. It relates works of literature to historical events, cultural patterns, philosophical and theological concepts and technological innovations.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The program prepares students for graduate and professional training (including law, business, teaching and public policy). With breadth and emphasis on the communication of ideas, it serves as an excellent point of departure for careers in marketing, public relations, government, diplomacy and community work.

*Contact:*

Division of Humanities, Arts, and Cultural Studies  
<http://newcollege.asu.edu/programs/english/>  
 harcs.dept@asu.edu  
 FAB N290  
 602/543-4444

### **Ethnicity, Race, First Nation Studies (BA) ASETHBA**

New College of Interdisciplinary Arts and Sciences

*Program Description:* Ethnicity, race and First Nation studies is the first such B.A. program in Arizona. It provides an integrated, comparative and comprehensive approach to the study of diversity among ethnic and racial groups and First Nations. A highlight of the program is the internship, which fosters direct links between the university and community-based settings. Both theoretical and applied perspectives are embedded in a curriculum addressing how ethnicity, race and First Nations shape identities, literacies, public policies and communities in local and transnational U.S. contexts. Students identify a career area enabling them to integrate their knowledge with specific course work tied to their career and advanced educational goals.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Rapid socioeconomic change, changing demographics, increased global competition and rapid cultural diversification have created an increasing need for workers and citizens knowledgeable about diverse ethnic and racial groups. Graduates of the undergraduate program in ethnicity, race and First Nation studies will be positioned to enter the workforce and function effectively and critically as informed citizens in a diverse and complex society.

*Contact:*

Division of Humanities, Arts, and Cultural Studies  
<http://newcollege.asu.edu/programs/erfns/harcs.dept@asu.edu>  
FAB N290  
602/543-4444

### **History (BA) ASHISBA**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The B.A. in history within the New College of Interdisciplinary Arts and Sciences trains students in the use of basic tools and methods of the historical discipline. Students are exposed to a broad span of modern history, a wide range of historiographical perspectives and approaches, and such fundamental categories of historical analysis as race, class, gender and ethnicity. Students develop habits of mind associated with history as a discipline. The program consists of several specific core courses and a range of electives and distributional requirements, providing students with a solid foundation in historical methods. Students tailor the major to their personal and professional interests in consultation with a faculty advisor.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The history program serves as excellent preparation for study in graduate or professional degree programs and for careers in which critical

thinking, research and writing skills are highly valued. This program provides a strong foundation for understanding the forces of change that shape contemporary society, the marketplace, and the lives of individuals and groups, thereby equipping students to negotiate the complex cultural, community and business environments of the 21st century.

*Contact:*

Division of Humanities, Arts, and Cultural Studies  
<http://newcollege.asu.edu/programs/history/harcs.dept@asu.edu>  
FAB N290  
602/543-4444

**Integrative Studies (BA) ASIASBA**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The B.A. in integrative studies within the New College of Interdisciplinary Arts and Sciences prepares students for broad employment alternatives or for pursuing graduate studies. As a variation on the classic liberal arts degree, students combine a solid foundation of lower-division courses, followed by upper-division liberal arts courses where students design an area of concentration (using an approved West campus minor or creating a concentration that is completely individualized) unique to their own interests and career pursuits. For example, the concentration can include, but is not limited to:

- Business.
- Communication.
- Criminal justice and prelaw.
- Education and teaching.
- Environmental issues and physical sciences.
- Languages and cultures.
- Social sciences and policy issues.
- Flexible and diverse, the program is capped with an internship experience.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Emphasizing interdisciplinary study combined with a specific area of concentration (e.g., business, communication studies, English, gerontology, history, psychology or pre-law), students tailor their programs to meet individualized career goals. The capstone internship program prepares students to make the transition smoothly to post baccalaureate employment in business, cultural, educational, community, social sciences and human service settings, as well as to graduate school. Students planning graduate or professional degrees in law, business, helping professions, or in traditional disciplines benefit from the flexibility of this program for a broad range of future academic and career pursuits.

*Contact:*

Division of Humanities, Arts, and Cultural Studies  
[http://newcollege.asu.edu/programs/integrative\\_studies/index.shtml](http://newcollege.asu.edu/programs/integrative_studies/index.shtml)  
harcs.dept@asu.edu  
FAB N290  
602/543-4444

**Interdisciplinary Arts & Performance (BA) ASIAPBA**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The B.A. in interdisciplinary arts and performance (IAP) is an interdisciplinary study of the arts and digital media with an emphasis on 20th- and 21st-century arts, performance, technology and practice. The program encourages practical application of theory and content area knowledge with the integration of skills and performance. IAP courses highlight creativity, innovation, integration and presentation.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* This interdisciplinary arts training can be the basis for a variety of personal and professional pursuits. Students who major in the program receive practical, professional training and solid academic skills. They gain extensive preparation for careers as artists, performers and creative professionals. They also develop critical backgrounds useful for becoming future teachers and scholars. Graduates of the program are prepared for advanced study in the performing arts or arts-related professions in education, art and cultural journalism, government and community arts administration, media services and production.

*Contact:*

Division of Humanities, Arts, and Cultural Studies  
[http://newcollege.asu.edu/programs/interdisciplinary\\_arts\\_performance/index.shtml](http://newcollege.asu.edu/programs/interdisciplinary_arts_performance/index.shtml)  
harcs.dept@asu.edu  
FAB N 290  
602/543-4444

**Life Sciences (BS) ASLSCBS**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The intricate connections between biology, chemistry and physics form the basis of the life sciences curriculum. The B.S. program emphasizes experiential learning: All required core courses have laboratories. By learning in an integrative environment that emphasizes the connectedness between disciplines, students gain a better understanding of larger scientific concepts and can view these concepts from multiple perspectives. Undergraduates have the opportunity to conduct independent research under the mentorship of faculty members or in internships outside of the department.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* The B.S. in life sciences prepares students for a wide range of careers by offering course and laboratory work and quantitative research opportunities that develop fundamental problem-solving, critical thinking, writing and communication skills. Graduates may enter careers in laboratory or field research, business, scientific journalism, publishing, teaching and medicine. Other opportunities include working as a laboratory technician or research associate in university and government research laboratories and hospital and diagnostic laboratories or working in pharmaceutical, biotechnology, agricultural and food processing companies. Undergraduate laboratory experience both on and off campus enhances employability in these areas. Students engaged in field studies are prepared for entry-level positions in private companies and state and federal agencies (e.g., wildlife biologist, environmental consultant, conservation officer).

*Contact:*

Division of Mathematical and Natural Sciences  
<http://newcollege.asu.edu/programs/lifesci/>  
MNS.Dept@asu.edu  
CLCC 217  
602/543-6050

### **Political Science (BA) ASPOLBA**

New College of Interdisciplinary Arts and Sciences

*Program Description:* Students gain understanding of theory, practice and policy underlying political processes locally, nationally and internationally in the B.A. in political science program. The degree trains students in research skills necessary for analysis of complex sociopolitical issues locally and globally. Course work is learner-centered in political theory, American political institutions, international relations and world affairs. This is a flexible program focusing on international, urban, and race/ethnic sociopolitical areas, internships, and service-learning/action research opportunities with emphasis on intellectual and concrete policy issues in the greater Phoenix metropolitan area, Arizona, the Arizona-Mexico borderlands, the Americas and the world.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* The political science curriculum provides a solid background for employment in a relevant profession and prepares students for graduate work in political science, social science disciplines, urban planning or in professional schools. The program serves as a good precursor to staff, manager or policy analyst positions in local, state and federal government. This degree is recognized as qualification for many careers in business (for-profit and nonprofit) and industry. Work may include binational, cross-border positions linking U.S. and Mexican businesses, Arizona-Sonora local government or local community groups on both sides of the border. Many students use the degree as a gateway to law school or

basis for further study in such applied fields as urban affairs/urban and regional planning, public administration, public policy or community development.

*Contact:*

Division of Social and Behavioral Sciences - W  
<http://newcollege.asu.edu/programs/polisci/>  
SBS.Dept@asu.edu  
FAB N251  
602/543-6058

**Political Science (BS) ASPOLBS**

New College of Interdisciplinary Arts and Sciences

*Program Description:* Students gain understanding of theory, practice and policy underlying political processes locally, nationally and internationally in the B.S. in political science program. The degree trains students in research skills necessary for analysis of complex sociopolitical issues locally and globally. Course work is learner-centered in political theory, American political institutions, and international relations and world affairs. This is a flexible program focusing on international, urban and race/ethnic sociopolitical areas, internships and service-learning/action research opportunities with emphasis on intellectual and concrete policy issues in the greater Phoenix metropolitan area, Arizona, the Arizona-Mexico borderlands, the Americas and the world. The B.S. requires six more credit hours (SBS 304 Social Statistics and a political science elective) than the B.A.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The political science curriculum provides a solid background for employment in a relevant profession and prepares students for graduate work in political science, social science disciplines, urban planning or in professional schools. The program serves as a good precursor to staff, manager or policy analyst positions in local, state and federal government. This degree is recognized as qualification for many careers in business (for-profit and nonprofit) and industry. Work may include binational, cross-border positions linking U.S. and Mexican businesses, Arizona-Sonora local government or local community groups on both sides of the border. Many students use the degree as a gateway to law school or basis for further study in such applied fields as urban affairs/urban and regional planning, public administration, public policy or community development.

*Contact:*

Division of Social and Behavioral Sciences - W  
<http://newcollege.asu.edu/programs/polisci/>  
SBS.Dept@asu.edu  
FAB N251  
602/543-6058

**Psychology (BA) ASPGSBA**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The diverse B.A. curriculum in psychology within the New College of Interdisciplinary Arts and Sciences consists of basic and applied courses covering multiple perspectives within the field, including clinical, cognitive systems/behavioral neuroscience, cross-cultural, developmental, organizational and social psychology. Courses are presented in the context of cultural, socio-historical and transnational issues, enabling the student to understand the relationship between psychology and other social and behavioral sciences. This program adds practical experiences to enrich study through service learning, internships and research with faculty members. Strong emphasis is placed on developing skills in critical thinking and reasoning, quantitative and qualitative research methods and writing to round out preparation for a career or for graduate studies.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* A degree in psychology will prepare students for a career in mental health professions (e.g., youth counselor, substance abuse counselor), social services (e.g., high school psychology teacher, occupational analyst) and government (e.g., sales and marketing, human resources management). The degree also provides an excellent foundation for graduate study in fields such as public administration, law, family studies, communication and the various graduate programs in psychology:

- Clinical and counseling.
- Cognitive neuroscience.
- Developmental.
- Environmental.
- Experimental.
- Physiological.
- Social.

*Contact:*

Division of Social and Behavioral Sciences - W  
<http://newcollege.asu.edu/programs/psychology/>  
SBS.Dept@asu.edu  
FAB N251  
602/543-6058

### **Psychology (BS) ASPGSBS**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The B.S. in psychology within the New College of Interdisciplinary Arts and Sciences consists of basic and applied courses covering multiple perspectives within the field, including clinical, cognitive systems/behavioral neuroscience, cross-cultural, developmental, organizational and social psychology. Courses are presented in the context of cultural, socio-historical and transnational issues, enabling the student to understand the relationship between psychology and other social and behavioral sciences.

The B.S. program is distinguished from the B.A. in that it requires two additional lab sciences (a life science and a physical science) and MAT 210 Brief Calculus. This program adds practical experiences to enrich study through service learning, internships and research with faculty members. Strong emphasis is placed on developing skills in critical thinking and reasoning, quantitative and qualitative research methods and writing to round out preparation for a career or graduate studies.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* A B.S. in psychology will prepare students for a career in mental health professions (e.g., youth counselor, substance abuse counselor), social services (e.g., high school psychology teacher; occupational analyst) and government (e.g., sales and marketing, human resources management). The degree also provides an excellent foundation for graduate study in fields such as public administration, law, family studies, communication and the various graduate programs in psychology:

- Clinical and counseling.
- Cognitive neuroscience.
- Developmental.
- Environmental.
- Experimental.
- Physiological.
- Social.

*Contact:*

Division of Social and Behavioral Sciences - W  
<http://newcollege.asu.edu/programs/psychology/>  
SBS.Dept@asu.edu  
FAB N251  
602/543-6058

### **Religion & Applied Ethics Studies (BA) ASRELBA**

New College of Interdisciplinary Arts and Sciences

*Program Description:* Many people make ethical decisions in the context of their religious beliefs or worldviews. By combining the disciplines of religion and applied ethics studies, students are able to analyze problems more realistically. Students in the B.A. in religion and applied ethics studies program within the New College of Interdisciplinary Arts and Sciences learn the applicable religious contexts for understanding why people choose to live or respond to ethical issues as they do. They learn to identify moral problems developing in society and develop the tools needed to formulate and critically evaluate various responses and to make careful and informed decisions about ethical matters in contemporary life. The religion and applied ethics studies program is capped with a thesis and internship experience.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* Graduates can anticipate opportunities in the following fields explored through their required internships:

- Business.
- Criminal justice.
- Education.
- Government.
- Human resources.
- Law enforcement.
- Law.
- Media.
- Medicine.
- Religious organizations.
- Social services.

*Contact:*

Division of Humanities, Arts, and Cultural Studies  
[http://newcollege.asu.edu/programs/religious\\_studies/harcs.dept@asu.edu](http://newcollege.asu.edu/programs/religious_studies/harcs.dept@asu.edu)  
FAB N290  
602/543-4444

### **Social & Behavioral Sciences (Behavioral Sciences) (BA) ASSBSBBA**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The B.A. curriculum in social and behavioral sciences provides basic understanding of assumptions underlying the social and behavioral sciences, develops research skills necessary for analysis of complex social issues, offers a flexible program tailored to the career goals of the individual student and offers both individual and group experiences in working with faculty on concrete intellectual and policy issues. Students choose either a social science or a behavioral science emphasis. All courses provide students with knowledge about the biological and/or social principles related to the behavior of individuals across multiple social contexts and institutions (family, community, society and culture).

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* The interdisciplinary degree is an excellent means toward creating a degree program that matches the individual's interests and fulfills many employers' expectations of a bachelor's degree, namely, that it should expose the student to a variety of outlooks and challenges. Such a degree will be competitive in most situations where the disciplinary social and behavioral degrees are accepted and is advantageous when seeking entry to broad professional programs such as regional planning or urban studies.

*Contact:*

Division of Social and Behavioral Sciences - W  
<http://newcollege.asu.edu/programs/sbs/>  
SBS.Dept@asu.edu  
FAB N251  
602/543-6058

**Social & Behavioral Sciences (Behavioral Sciences) (BS) ASSBSBBS**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The social and behavioral sciences curriculum provides basic understanding of assumptions underlying the social and behavioral sciences, develops research skills necessary for analysis of complex social issues, offers a flexible program tailored to the career goals of the individual student and offers both individual and group experiences in working with faculty on concrete intellectual and policy issues. Students choose either a social science or a behavioral science emphasis. All courses provide students with knowledge about the biological and/or social principles related to the behavior of individuals across multiple social contexts and institutions (family, community, society and culture).

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The interdisciplinary degree is an excellent means of creating a degree program that matches the individuals interests and fulfills many employers expectations of a bachelor's degree, namely that it should expose the student to a variety of outlooks and challenges. Such a degree will be competitive in most situations where the disciplinary social and behavioral degrees are accepted and is advantageous when seeking entry to broad professional programs such as regional planning or urban studies.

*Contact:*

Division of Social and Behavioral Sciences - W  
<http://newcollege.asu.edu/programs/sbs/>  
SBS.Dept@asu.edu  
FAB N251  
602/543-6058

**Social & Behavioral Sciences (Social Sciences) (BA) ASSBSSBA**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The B.A. curriculum in social and behavioral sciences provides basic understanding of assumptions underlying the social and behavioral sciences, develops research skills necessary for analysis of complex social issues, offers a flexible program tailored to the career goals of the individual student and offers both individual and group experiences in working with faculty on concrete intellectual and policy issues. Students choose either a social science or a behavioral science emphasis. All courses provide students with knowledge about the biological

and/or social principles related to the behavior of individuals across multiple social contexts and institutions (family, community, society and culture).

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The interdisciplinary degree is an excellent means toward creating a degree program that matches the individual's interests and fulfills many employers' expectations of a bachelor's degree, namely that it should expose the student to a variety of outlooks and challenges. Such a degree will be competitive in most situations where the disciplinary social and behavioral degrees are accepted and is advantageous when seeking entry to broad professional programs such as regional planning or urban studies.

*Contact:*

Division of Social and Behavioral Sciences - W  
<http://newcollege.asu.edu/programs/sbs>  
SBS.Dept@asu.edu  
FAB N251  
602/543-6058

### **Social & Behavioral Sciences (Social Sciences) (BS) ASSBSSBS**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The social and behavioral sciences curriculum provides basic understanding of assumptions underlying the social and behavioral sciences, develops research skills necessary for analysis of complex social issues, offers a flexible program tailored to the career goals of the individual student and offers both individual and group experiences in working with faculty on concrete intellectual and policy issues. Students choose either a social science or a behavioral science emphasis. All courses provide students with knowledge about the biological and/or social principles related to the behavior of individuals across multiple social contexts and institutions (family, community, society and culture).

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The interdisciplinary degree is an excellent means of creating a degree program that matches the individuals interests and fulfills many employers expectations of a bachelor's degree, namely that it should expose the student to a variety of outlooks and challenges. Such a degree will be competitive in most situations where the disciplinary social and behavioral degrees are accepted and is advantageous when seeking entry to broad professional programs such as regional planning or urban studies.

*Contact:*

Division of Social and Behavioral Sciences - W  
<http://newcollege.asu.edu/programs/sbs>  
SBS.Dept@asu.edu

FAB N251  
602/543-6058

### **Sociology (BA) ASSOCBA**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The B.A. curriculum in sociology within the New College of Interdisciplinary Arts and Sciences provides an understanding of theory, practice and policy underlying issues of social change, inequality and diversity from multiple perspectives, including race/ethnicity, gender, economic position, age, geographic location and position in the global political economy.

The program enhances students' understanding of social realities and institutions at local, national and international levels, and how sociology contributes to the other social sciences and to the humanities. Students gain a basic understanding of assumptions underlying the discipline of sociology and develop the research skills necessary for analysis of complex social issues. This is a flexible program with opportunities to work collaboratively with faculty on concrete intellectual and policy issues.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates apply the sociological perspective to a wide variety of jobs in business, the health professions, the criminal justice system, social services and government. Course work in sociology provides a valuable preparation for careers in journalism, politics, public relations or public administration, all fields that involve investigative skills and an ability to work with diverse groups. Graduates with an advanced degree in sociology may become:

- Community developers.
- Criminologists.
- Demographers.
- Gerontologists.
- Research analysts.
- Statisticians.
- Survey researchers.
- Urban planners.

*Contact:*

Division of Social and Behavioral Sciences - W  
<http://newcollege.asu.edu/programs/sociology/>  
SBS.Dept@asu.edu  
FAB N251  
6025436058

### **Sociology (BS) ASSOCBS**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The B.S. curriculum in sociology within the New College of Interdisciplinary Arts and Sciences provides an understanding of theory, practice, and policy underlying issues of social change and of inequality and diversity from multiple perspectives, including race/ethnicity, gender, economic position, age, geographic location and position in the global political economy. The program enhances students' understanding of social realities and institutions at local, national and international levels, and how sociology contributes to the other social sciences and to the humanities. Students gain basic understanding of assumptions underlying the discipline of sociology and develop the research skills necessary for analysis of complex social issues. The B.S. program requires six more credit hours of methods courses (both qualitative and quantitative) than the B.A. This is a flexible program with individual and group experiences in working with faculty on concrete intellectual and policy issues.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates apply the sociological perspective to a wide variety of jobs in business, the health professions, the criminal justice system, social services and government. A valuable preparation for careers in journalism, politics, public relations or public administration, all fields that involve investigative skills and an ability to work with diverse groups. Graduates with an advanced degree in sociology may become:

- Community developers.
- Criminologists.
- Demographers.
- Gerontologists.
- Research analysts.
- Statisticians.
- Survey researchers.
- Urban planners.

*Contact:*

Division of Social and Behavioral Sciences - W  
<http://newcollege.asu.edu/programs/sociology/>  
SBS.Dept@asu.edu  
FAB N251  
602/543-6058

### **Spanish (BA) ASSPABA**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The B.A. in Spanish program within the New College of Interdisciplinary Arts and Sciences consists of three tracks: language, literature and cultures, integrated within the discipline and with other disciplines within the college. Classes are taught through an intensive language approach using the most recent electronic technologies.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* The Spanish program offers excellent preparation for graduate school or for employment as a teacher in either the elementary or secondary school system, especially in those districts where bilingual programs are integral to the curricula. Outside the education system, students majoring in Spanish can find employment as translators and interpreters in social agencies, federal and state courts, the diplomatic corps, law enforcement agencies and law firms. The business world also provides employment for those fluent in Spanish. This is especially true in the Southwest, with its proximity to Mexico, and through new outlets opened by the tri-national NAFTA agreement.

*Contact:*

Division of Humanities, Arts, and Cultural Studies

<http://newcollege.asu.edu/programs/spanish/>

harcs.dept@asu.edu

FAB N290

602/543-4444

### **Women's Studies (BA) ASWSTBA**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The B.A. in women's studies, within the New College of Interdisciplinary Arts and Sciences, is an interdisciplinary program emphasizing intersectional approaches to the study of gender, race, class, ethnicity and sexuality in national and transnational contexts. Consistent with the university's design imperatives of social embeddedness and use-inspired research, women's studies, through its course offerings, research initiatives and co-curricular programs, seeks to further the understanding of women and gender, and to promote social justice.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* The women's studies program builds a solid educational foundation, providing knowledge and critical thinking skills needed to deal with changing gender roles in society. The program also prepares students for opportunities in many settings:

- Business and professional schools.
- Education and training.
- Graduate study in the humanities and social sciences.
- Healthcare services.
- Human resources development.
- Public and business administration.
- Social services.

*Contact:*

Division of Humanities, Arts, and Cultural Studies

[http://newcollege.asu.edu/programs/womens\\_studies/](http://newcollege.asu.edu/programs/womens_studies/)

harcs.dept@asu.edu  
FAB N290  
602/543-4444

### **Women's Studies (BS) ASWSTBS**

New College of Interdisciplinary Arts and Sciences

*Program Description:* The B.S. in women's studies, within the New College of Interdisciplinary Arts and Sciences, is an interdisciplinary program emphasizing intersectional approaches to the study of gender, race, class, ethnicity and sexuality in national and transnational contexts. Consistent with the university's design imperatives of social embeddedness and use-inspired research, women's studies, through its course offerings, research initiatives and co-curricular programs, seeks to further the understanding of women and gender, and to promote social justice. The B.S. program is distinguished by its quantitative emphasis.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The women's studies program builds a solid educational foundation, providing knowledge and critical thinking skills needed to deal with changing gender roles in society. The program also prepares students for opportunities in many settings:

- Business and professional schools.
- Education and training.
- Graduate study in the humanities and social sciences.
- Healthcare services.
- Human resources development.
- Public and business administration.
- Social services.

*Contact:*

Division of Humanities, Arts, and Cultural Studies  
[http://newcollege.asu.edu/programs/womens\\_studies/](http://newcollege.asu.edu/programs/womens_studies/)  
harcs.dept@asu.edu  
FAB N290  
602/543-4444

### **Nursing and Health Innovation, College of**

#### **Applied Science (Food Service Management) (BAS) ECNTRBAS**

College of Nursing and Health Innovation

*Program Description:* The B.A.S. programs are a flexible, 60-credit-hour degree designed specifically for students who have earned an A.A.S. from a regionally accredited institutions. In completing the B.A.S., students complete all ASU

graduation requirements.

The concentration in food service management is aimed at those students with a specialty in culinary or hospitality science.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students applying to this program must have completed an Associate of Applied Science (A.A.S.) degree. Not available for freshmen.

*Career Opportunities:* This degree prepares students for careers in food production, service, management and marketing. With additional education and/or professional training, students may also become credentialed as certified dietary managers, school food service and nutrition specialists or registered sanitarians.

*Contact:*

College of Nursing & Health Innovation  
<http://www.poly.asu.edu/saas/nutrition>  
nutrition@asu.edu  
HSC 1386  
480/727-1728

### **Applied Science (Wellness) (BAS) ECEXWBAS**

College of Nursing & Health Innovation

*Program Description:* The B.A.S. programs are a flexible, 60-credit-hour degree designed specifically for students who have earned an A.A.S. from a regionally accredited institution.

The concentration in wellness provides students with the knowledge, skills and professional expertise to assist individuals across their life span in adopting healthy lifestyles. Students are exposed to the latest research and practices designed to encourage behavioral changes that foster health and wellness.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students applying to this program must have completed an Associate of Applied Science (A.A.S.) degree. Not available for freshmen.

*Career Opportunities:* Opportunities range broadly across many sectors of the fitness and wellness industry and health promotion professions. Possible career settings include work site (corporate) health promotion/fitness, clinical/medical rehabilitation programs, community agencies and programs and private health/fitness clubs and spas.

*Contact:*

College of Nursing & Health Innovation  
<http://www.poly.asu.edu/saas/wellness>

wellness@asu.edu  
EAW 109  
4807271945

### **Exercise & Wellness (Exercise & Wellness) (BS) ECEXWBS**

College of Nursing & Health Innovation

*Program Description:* The B.S. in exercise and wellness with a concentration in exercise and wellness provides students with the knowledge, skills and professional expertise to assist individuals across the life span in adopting physically active and healthy behaviors. Such behaviors lead to increased fitness, wellness and optimal health. Students are exposed to the latest research and practices designed to enhance physical activity and wellness, including both laboratory and field experiences. A distinctive aspect of the exercise and wellness concentration is an outstanding internship program that provides pre-professional experience in the fitness, wellness and health industry throughout the metropolitan Phoenix area.

Effective fall 2009, students offered admission into this degree program will pursue the degree at either the Polytechnic or Downtown Phoenix campus, based on the following criteria:

- A. Students admitted immediately after earning a high school diploma, regardless of any earned college credit (or who have not attended any college since high school graduation), will pursue the program at the Downtown Phoenix campus.
  - B. Students admitted after attending community college or another university will pursue the program at the Polytechnic campus, and will be reviewed by an advisor to determine their level of progression in the program.
- Students who will not be enrolling in upper-division courses in the major may have their campus changed to the Downtown Phoenix campus, and may pursue the program at that campus, if it is deemed possible by an academic advisor.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Opportunities range broadly across many sectors of the fitness and wellness industries and health promotion professions. Potential career settings include work site (corporate) health promotion/fitness programs, clinical/medical rehabilitation programs, community agencies and programs and private health/fitness clubs and spas. The degree is also ideal preparation for advanced study in such health professions as cardiopulmonary rehabilitation and physical therapy, as well as graduate study in exercise and wellness.

*Contact:*  
College of Nursing & Health Innovation

<http://www.poly.asu.edu/saas/wellness>  
wellness@asu.edu  
EAW 109  
4807271945

### **Exercise & Wellness (Health Promotion) (BS) ECEXWHBS**

College of Nursing & Health Innovation

*Program Description:* The B.S. in exercise and wellness with a concentration in health promotion provides students with the knowledge, skills and professional expertise to assist individuals across their life span in adopting healthy lifestyles. Students are exposed to the latest research and practices designed to encourage behavioral changes that foster health and wellness. A distinctive aspect of the health promotion concentration is an outstanding internship program which provides pre-professional experience in the health, health promotion, health education and wellness professions throughout the metropolitan Phoenix area.

Effective fall 2009, students offered admission into this degree program will pursue the degree at either the Polytechnic or Downtown Phoenix campus, based on the following criteria:

- A. Students admitted immediately after earning a high school diploma, regardless of any earned college credit (or who have not attended any college since high school graduation), will pursue the program at the Downtown Phoenix campus.
  - B. Students admitted after attending community college or another university will pursue the program at the Polytechnic campus, and will be reviewed by an advisor to determine their level of progression in the program.
- Students who will not be enrolling in upper-division courses in the major may have their campus changed to the Downtown Phoenix campus, and may pursue the program at that campus, if it is deemed possible by an academic advisor.

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* Career opportunities range broadly across many sectors of the wellness industry and health promotion professions. Possible career settings include work site (corporate) health promotion, clinical and medical health promotion and educational programs and community and governmental health agencies and programs. This degree also provides preparation for advanced study in fields such as public health or health promotion.

*Contact:*

College of Nursing & Health Innovation  
<http://www.poly.asu.edu/saas/wellness>

wellness@asu.edu  
EAW 109  
4807271945

### **Nursing (BSN) NUNURDBSN**

College of Nursing & Health Innovation

*Program Description:* Through a curriculum based upon evidence-based, critical thinking, sound knowledge and strong interpersonal communication skills, the B.S.N. program prepares students to provide the highest quality of healthcare. General education course work within the curriculum, including biology, social science and the humanities, provides a strong foundation for the nursing theory and clinical/experiential courses.

The program curriculum is being redesigned for implementation in fall 2009. Please contact program office for additional information.

In addition to the traditional B.S.N. program, ASU also offers these program options:

- The R.N.-to-B.S.N. entry option offers registered nurses the opportunity to complete upper-division nursing program requirements leading to a B.S.N. See [http://nursing.asu.edu/programs/undergraduate/rnbsn/rnbsnchksht\\_nonalliance.pdf](http://nursing.asu.edu/programs/undergraduate/rnbsn/rnbsnchksht_nonalliance.pdf).
- The Arizona State University/Maricopa County Community College District Nursing Alliance Program is specifically designed for students in a Maricopa County Community College interested in the R.N.-B.S.N. track program. See [http://nursing.asu.edu/programs/undergraduate/rnbsn/rnbsnchksht\\_alliance.pdf](http://nursing.asu.edu/programs/undergraduate/rnbsn/rnbsnchksht_alliance.pdf).

*Language Requirement:* N | *Program Fee:* Y

*Career Opportunities:* Graduates deliver nursing care to individuals, families and communities. B.S.N. graduates are eligible to sit for the national licensing examination for registered nurses. Completion of this degree program also prepares individuals for entrance into graduate study in nursing at the master's degree level, which is essential for teaching, administration, clinical specialization and nursing research.

*Contact:*

College of Nursing & Health Innovation  
<http://nursing.asu.edu>  
nursing@asu.edu  
602/496-0852 or 602/496-0888

## Nutrition (Dietetics) (BS) ECNTRDBS

College of Nursing & Health Innovation

*Program Description:* The dietetics concentration, under the B.S. in nutrition, provides all of the academic course work a student needs to qualify to become a registered dietitian (R.D.). A registered dietitian is a food and nutrition expert who has met the minimum academic and professional requirements to qualify for the credential. In addition to a core of professional nutrition courses, students must complete a broad range of science, management and communication classes. The program emphasizes the application of nutrition within clinical, community, food production and wellness sites. Graduates of the program can apply to complete a dietetic internship, which will further prepare them to take the exam to become an R.D. The dietetics program is currently granted accreditation by the Commission on Accreditation for Dietetics Education of the American Dietetic Association.

Effective fall 2009, students offered admission into this degree program will pursue the degree at either the Polytechnic or Downtown Phoenix campus, based on the following criteria:

- A. Students admitted immediately after earning a high school diploma, regardless of any earned college credit (or who have not attended any college since high school graduation), will pursue the program at the Downtown Phoenix campus
  - B. Students admitted after attending community college or another university will pursue the program at the Polytechnic campus, and will be reviewed by an advisor to determine their level of progression in the program
- Students who will not be enrolling in upper-division courses in the major may have their campus changed to the Downtown Phoenix campus, and may pursue the program at that campus, if it is deemed possible by an academic advisor.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The nutrition/dietetics field provides employment opportunities in:

- Consulting.
- Education.
- Food/nutrition marketing and sales.
- Hospitals and other healthcare facilities.
- Nutrition/health promotion.
- Public health agencies.
- School food services.

*Contact:*

College of Nursing & Health Innovation  
<http://www.poly.asu.edu/saas/nutrition/nutrition@asu.edu>  
HSC 1386  
480/727-1728

**Nutrition (Food & Nutrition Management) (BS) ECNTRMBS**

College of Nursing & Health Innovation

*Program Description:* The food and nutrition management concentration in the B.S. in nutrition is designed to provide students with an understanding of the food industry and the ability to apply nutrition principles to food production. Students will be able to manage and market food and develop a food or menu that meets a specific nutrition guideline.

Effective fall 2009, students offered admission into this degree program will pursue the degree at either the Polytechnic or Downtown Phoenix campus, based on the following criteria:

- A. Students admitted immediately after earning a high school diploma, regardless of any earned college credit (or who have not attended any college since high school graduation), will pursue the program at the Downtown Phoenix campus.
  - B. Students admitted after attending community college or another university will pursue the program at the Polytechnic campus, and will be reviewed by an advisor to determine their level of progression in the program.
- Students who will not be enrolling in upper-division courses in the major may have their campus changed to the Downtown Phoenix campus, and may pursue the program at that campus, if it is deemed possible by an academic advisor.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* This degree prepares students to become food service directors at schools, healthcare facilities and corporate food service operations. Our graduates aspire to own restaurants or nutrition-related businesses, work in supplement or pharmaceutical sales, or work in food marketing and distribution.

*Contact:*

College of Nursing & Health Innovation  
<http://www.poly.asu.edu/saas/nutrition/nutrition@asu.edu>  
HSC 1386  
480/727-1728

## Nutrition (Human Nutrition) (BS) ECNTRHBS

College of Nursing & Health Innovation

*Program Description:* The human nutrition concentration, under the B.S. in nutrition, provides students with a strong foundation in nutrition and science, leading to medical school or health professions. Students from this program have gone on to study:

- Dentistry.
- Naturopathic medicine.
- Optometry and podiatry.
- Osteopathic medicine.
- Pharmacy.
- Physician assistants.

The focus on human nutrition offers students all of the science course work they need to succeed in continued educational opportunities. Course work includes anatomy, physiology, chemistry and microbiology. Students gain knowledge of nutritional concepts that healthcare professionals sometimes lack.

Effective fall 2009, students offered admission into this degree program will pursue the degree at either the Polytechnic or Downtown Phoenix campus, based on the following criteria:

A. Students admitted immediately after earning a high school diploma, regardless of any earned college credit (or who have not attended any college since high school graduation), will pursue the program at the Downtown Phoenix campus.

B. Students admitted after attending community college or another university will pursue the program at the Polytechnic campus, and will be reviewed by an advisor to determine their level of progression in the program.

- Students who will not be enrolling in upper-division courses in the major may have their campus changed to the Downtown Phoenix campus, and may pursue the program at that campus, if it is deemed possible by an academic advisor.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The nutrition field provides employment opportunities in healthcare, public health, education, food service, food/nutrition marketing and sales, and nutrition/health promotion and consulting. Graduates of the human nutrition program often go on to apply to other health education or M.S. programs. The area of research is also a good fit for nutrition majors. Several outstanding scientists have received their bachelor's degree from this program; add a master's degree or a Ph.D. and the opportunities within the research field are unlimited.

*Contact:*

College of Nursing & Health Innovation  
<http://www.poly.asu.edu/saas/nutrition>  
nutrition@asu.edu  
HSC 1386  
480/727-1728

**Nutrition (Nutrition Communication) (BS) ECNTRCBS**

College of Nursing & Health Innovation

*Program Description:* The nutrition communication concentration, under the B.S. in nutrition, was developed in collaboration with the Walter Cronkite School of Journalism and Mass Communication. While focusing on human nutrition, students take classes designed to build a foundation toward becoming expert communicators on issues related to food and nutrition. Nutrition courses provide the content for articles that students write in their communication classes. This degree program provides students with a strong understanding of the scientific method, statistics, nutrition, healthcare, fitness and wellness that many traditional journalists lack. Faculty members teach students how to avoid sensationalism or sacrificing reality to get a better story.

Effective fall 2009, students offered admission into this degree program will pursue the degree at either the Polytechnic or Downtown Phoenix campus, based on the following criteria:

- A. Students admitted immediately after earning a high school diploma, regardless of any earned college credit (or who have not attended any college since high school graduation), will pursue the program at the Downtown Phoenix campus.
- B. Students admitted after attending community college or another university will pursue the program at the Polytechnic campus, and will be reviewed by an advisor to determine their level of progression in the program.
  - Students who will not be enrolling in upper-division courses in the major may have their campus changed to the Downtown Phoenix campus, and may pursue the program at that campus, if it is deemed possible by an academic advisor.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:*

*Career Opportunities:* The nutrition communication field offers employment opportunities with newspapers, magazines, Web-based corporations, community and healthcare agencies and private corporations (e.g., public relations firms). With this degree, graduates can pursue careers as authors, freelance writers for

newspapers and magazines, public relations representatives for food and beverage companies or consultants in program or product development.

*Contact:*

College of Nursing & Health Innovation  
<http://www.poly.asu.edu/saas/nutrition>  
nutrition@asu.edu  
HSC 1386  
480/727-1728

## Public Programs, College of

### Criminal Justice & Criminology (BS) PPCRIMJBS

College of Public Programs

*Program Description:* The study of criminal justice and criminology involves analysis of the theories, laws, policies and practices associated with understanding criminal and delinquent behavior, the law and the response to violations of law. The program provides an interdisciplinary social science perspective to the study crime and criminal justice. The focus is on the policies and practices of criminal justice system components, including law enforcement, corrections and the courts. Students receive a solid foundation of course work that provides the content, analytical and communication skills required for working in complex criminal justice occupations.

The School of Criminology and Criminal Justice administers the program from the Downtown Phoenix campus. While most criminal justice and criminology courses are offered on that campus, students may also take criminal justice and criminology courses at the Tempe and West campuses.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates of the criminal justice and criminology program find a strong job market in the public and private sectors. Employment opportunities exist in the areas of:

- Corrections.
- Court personnel.
- Law enforcement.
- Legal offices.
- Parole.
- Private security.
- Probation.
- Victim witness advocate agencies.

Graduates may also pursue advanced degrees in law, criminology and criminal justice and other social science disciplines.

*Contact:*

School of Criminology and Criminal Justice

<http://ccj.asu.edu/>

[sccj@asu.edu](mailto:sccj@asu.edu)

6025438319

**Nonprofit Leadership & Management (BS) PPNLMBS**

College of Public Programs

*Program Description:* Through the B.S. in nonprofit leadership and management program students are empowered to become successful professionals who positively impact the community in which they work. The nonprofit sector in the United States is unique in form and function. This sector includes institutions and individuals situated between government, public and business entities. It is this sector, with more than 1.2 million organizations in the U.S., that mediates, innovates and promotes social causes and services.

Philanthropy (voluntary action for the public good) is a hallmark of the nonprofit sector as individuals give their time, money and know-how to causes about which they care. Having completed the undergraduate program, a student may also earn national certification from American Humanics, Inc., which will prepare him or her to lead and strengthen nonprofit organizations. For more information, access the school's Web site.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Depending on their interests, graduates seek work in various areas of the nonprofit sector. They find employment in diverse settings that include affiliates of well-known national organizations, such as American Red Cross, America's Second Harvest, March of Dimes, The Humane Society of the United States, National Urban League, United Way and primarily youth-serving entities such as Big Brothers Big Sisters, Boys and Girls Clubs, Boy Scouts of America, Girl Scouts of the USA, Camp Fire USA and the YMCA of the USA.

Increasing opportunities in the nonprofit sector include careers across the spectrum of community issues such as the arts, environment, healthcare and others. Typical positions include roles as program directors, development directors, field executives, volunteer coordinators and similar positions from a variety of agencies and organizations.

*Contact:*

School of Community Resources and Development

<http://scrd.asu.edu>

[scrd@asu.edu](mailto:scrd@asu.edu)

UCENT 550

602/496-0550

## **Parks & Recreation Management (BS) PPRMBS**

College of Public Programs

*Program Description:* The parks and recreation fields emerged from the youth development, recreation and park movements of the late 19th century. The B.S. in parks and recreation provides an interdisciplinary education in the management of parks, protected areas and community-based recreation services. Students learn to integrate the managerial, natural and social sciences to make informed decisions for recreation service delivery.

The curriculum combines classroom instruction with field experiences and covers parks and recreation policy, programming, planning, management, communication, inclusive services and history. The B.S. in parks and recreation management prepares students for professional positions in a variety of public, private and nonprofit organizations. The National Recreation and Park Association accredits this degree program.

Students interested in the B.S. in parks and recreation management may also be interested in the school's therapeutic recreation program; see <http://scrd.asu.edu/portal/programs/undergraduate/parks-recreation-management-prm/bs-in-parks-and-recreation-management-therapeutic-recreation-emphasis>.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* This degree program prepares students for professional positions in a variety of public, private and nonprofit organizations. Graduates are employed in a variety of settings in Arizona, nationally and abroad. Graduates find employment in such diverse settings as youth agencies, city park and recreation departments, county and state park agencies, tour operations, sport venues, special event management, hospitals and federal natural resource agencies. In such settings, graduates design, develop and manage services that address the recreational needs of a particular clientele.

*Contact:*

School of Community Resources and Development  
<http://scrd.asu.edu>  
scrd@asu.edu  
UCENT 550  
602/496-0550

## **Parks & Recreation Management (Therapeutic Recreation) (BS) PPRMTRBS**

College of Public Programs

*Program Description:* The BS in parks and recreation management with a concentration in therapeutic recreation is the only program in Arizona that prepares students for national professional certification in therapeutic recreation.

The program is designed for students who have an interest in providing therapeutic interventions and adaptive recreation services for individuals with social problems, illnesses and disabling conditions. Students who choose this concentration are truly committed to improving people's lives and contributing to their communities.

*Language Requirement: N | Program Fee: N*

*Admission Requirements:*

*Career Opportunities:* There are a range of job opportunities for therapeutic recreation professionals ranging from clinical settings such as hospitals and nursing homes to adventure programming for youth-at-risk and people with disabilities.

*Contact:*

School of Community Resources and Development

<http://scrd.asu.edu/portal/>

scrd@asu.edu

UCENT 550

602/496-0550

### **Social Work (BSW) PPSWUSWU**

College of Public Programs

*Program Description:* Social work practitioners 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 undergraduate curriculum leads to a B.S.W. Juniors and seniors majoring in social work focus on social work courses in social policy and services, human behavior in the social environment, social work practice, research and field instruction in community agencies. In addition, majors take elective courses in related areas.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* The B.S.W. practitioner is a generalist focusing on roles such as advocacy, referral, case management and problem-solving functions with individuals, groups, families, organizations and the community.

Employment in social work is expected to increase commensurately with the needs of a growing and diverse population.

Social workers are employed in public and private agencies dealing with a wide variety of social issues, including:

- Adoptions.
- Aging.
- AIDS.
- Child abuse.
- Corrections.

- Delinquency.
- Disability.
- Discrimination.
- Domestic violence.
- Family dysfunction.
- Foster care.
- Health.
- Homelessness.
- Mental health.
- Poverty.
- School-related problems.
- Substance abuse.
- Teen pregnancy.

Social work skills such as problem-solving, resource utilization, counseling, group work and community organization are also useful for positions with industry in employee relations and mediation.

*Contact:*

School of Social Work  
<http://chs.asu.edu/>  
 social\_work@asu.edu  
 602/543-6602

**Tourism Development & Management (BS) PPTDMBS**

College of Public Programs

*Program Description:* Through the B.S. in tourism development and management program, students acquire the planning and management skills related to the growth and development of tourism throughout the world. The curriculum prepares students for employment across a wide variety of occupations in the rapidly expanding travel and tourism industry, while taking full advantage of its strong connections with the professional tourism community of Phoenix.

Through the required internship component of the program, students gain practical experiences leading to professional positions in various travel, tourism and related fields. Exposure to the businesses of heritage tourism, nature-based tourism, resort management and meeting and convention planning prepare students for successful careers in the travel and tourism industry. Having completed the B.S. in tourism development and management, a student may also complete a certificate in convention sales and meeting planning.

In addition, students may also choose to complete a study abroad program. For more information, please see <http://scrd.asu.edu/portal/ia/study-abroad-programs/>.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* The travel and tourism industry is the largest employer in the world and the second largest in Arizona. Based upon interests, graduates can seek work in the public, nonprofit or private/commercial sectors. Graduates find employment in such diverse settings as resorts, meeting planning, convention and visitor bureaus, tour operations and commercial recreation businesses. In such settings, graduates design, develop and manage services that address the needs of a particular clientele. The metropolitan Phoenix area is a major hub of tourism in the southwestern U.S. and has experienced rapid growth in the air transportation sector, sports tourism, resorts and hotels, meetings and conventions, state and national parks, business and corporate travel and the gaming and casino sectors.

*Contact:*

School of Community Resources and Development  
<http://scrd.asu.edu>  
scrd@asu.edu  
UCENT 550  
6024960550

### **Urban & Metropolitan Studies (BA) PPURBBA**

College of Public Programs

*Program Description:* The B.A. program in urban and metropolitan studies offers students the opportunity to explore a wide range of issues that influence the quality of urban life. The Phoenix metropolitan region is one of the nation's fastest growing urban centers and it's projected that the area will continue this trajectory of rapid growth. Located in the heart of downtown Phoenix, the urban and metropolitan studies program provides an ideal setting for training future leaders to effectively address the challenges of rapid growth along with other contemporary urban issues. Students examine and engage these issues through multiple lenses—historic, social, cultural, economic and political.

Through course work and hands-on internships, students engage in scholarship, practice and stewardship. As scholars, they contribute and expand our body of knowledge at the highest level. And as stewards, they contribute to enhance the health and well being of our places, institutions and communities.

*Language Requirement: Y | Program Fee: N*

*Career Opportunities:* Graduates from this program work in public, private and not-for-profit fields dedicated to improving urban life. Many graduates also pursue advanced degrees in urban planning, public policy, public administration, law, business, real estate development, arts administration, historic preservation, journalism, education and other fields.

*Contact:*

School of Community Resources and Development

<http://spa.asu.edu/new/urban/default.htm>  
spa@asu.edu  
UCENT 450  
602/496-0450

### **Urban & Metropolitan Studies (BS) PPURBBS**

College of Public Programs

*Program Description:* The B.S. program in urban and metropolitan studies offers students the opportunity to explore a wide range of issues that influence the quality of urban life. The Phoenix metropolitan region is one of the nation's fastest growing urban centers and it's projected that the area will continue this trajectory of rapid growth. Located in the heart of downtown Phoenix, the urban and metropolitan studies program provides an ideal setting for training future leaders to effectively address the challenges of rapid growth along with other contemporary urban issues.

Students examine and engage these issues through multiple lenses—historic, social, cultural, economic and political. Applying quantitative as well as qualitative research methods, students develop and implement innovative means for enhancing quality of place and quality of life in the contemporary metropolis. Students in the B.S. program are required to complete an upper-division course in statistics.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates from this program work in public, private and not-for-profit fields dedicated to improving urban life. Many graduates also pursue advanced degrees in:

- Arts administration.
- Business.
- Education.
- Historic preservation.
- Journalism.
- Law.
- Public administration.
- Public policy.
- Real estate development.
- Urban planning.

*Contact:*

School of Public Affairs  
<http://spa.asu.edu/new/urban/default.htm>  
spa@asu.edu  
UCENT 450  
602/496-0450

## Sustainability, School of

### Sustainability (BA) SUSUSTBA

School of Sustainability

*Program Description:* The B.A. in sustainability introduces students to the concept of sustainability in the context of real-world problems, exploring the interaction of environmental, economic and social systems. Although the program is transdisciplinary, the B.A. in sustainability is best suited to those inclined towards social sciences, planning or related fields.

Students pursuing a B.A. in sustainability can pursue the following tracks:

- Society and sustainability.
- Policy and governance in sustainable systems.
- International development and sustainability.
- Sustainable urban dynamics.

Students will gain a general understanding of sustainability issues at the local, regional and global level. They will be adaptable, capable of both communicating and learning across a number of disciplines, and have a strong orientation towards problem solving.

*Language Requirement: Y | Program Fee: N*

*Career Opportunities:* School of Sustainability graduates are prepared for admission into strong graduate and professional schools. They may also assume positions in industry, consultancy, utilities, regulatory agencies, nonprofits, governmental agencies and nongovernmental organizations. Recent interest in sustainability within business and government has created new employment opportunities (e.g., sustainability coordinators, directors and managers). By engaging a breadth of knowledge and experience, and by acquiring the skills to integrate various domains of knowledge, sustainability students prepare themselves for a variety of careers to help find solutions to sustainability challenges.

*Contact:*

School of Sustainability  
<http://schoolofsustainability.asu.edu>  
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GIOS 108  
480/727-6963

### Sustainability (BS) SUSUSTBS

School of Sustainability

*Program Description:* The B.S. in sustainability introduces students to the concept of sustainability in the context of real-world problems, exploring the interaction of environmental, economic and social systems. Although the program is transdisciplinary, the B.S. in sustainability is best suited to those inclined towards natural sciences, economics or engineering.

Students pursuing a B.S. in sustainability can pursue the following tracks:

- Sustainable energy, materials and technology.
- Economics of sustainability.
- Sustainable ecosystems.

Students will gain a general understanding of sustainability issues at the local, regional and global level. They will be adaptable, capable of both communicating and learning across a number of disciplines, and have a strong orientation towards problem solving.

*Language Requirement:* Y | *Program Fee:* N

*Career Opportunities:* School of Sustainability graduates are prepared for admission into strong graduate and professional schools. They may also assume positions in industry, consultancy, utilities, regulatory agencies, nonprofits, governmental agencies and nongovernmental organizations. Recent interest in sustainability within business and government has created new employment opportunities (e.g., sustainability coordinators, directors and managers). By engaging a breadth of knowledge and experience, and by acquiring the skills to integrate various domains of knowledge, sustainability students prepare themselves for a variety of careers to help find solutions to sustainability challenges.

*Contact:*

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GIOS 108  
480/727-6963

## **Teacher Education and Leadership, College of**

### **Early Childhood Teaching & Leadership (BAE) TEECTLBAE**

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in early childhood teaching and leadership program in the College of Teacher Education and Leadership is available at all campuses. This program offers students a firm grounding in early childhood teaching and programming with special emphasis on community connectedness, technology integration, administration, policy analysis and advocacy related to young children

and their families.

The program and faculty members have earned several national awards on integrating technology into teaching. Every semester students engage in field experiences and internships that align with their academic program. Graduates are recommended for the new Arizona birth-grade 3 teacher certification and a provisional endorsement to work with English language learners. All graduates desiring to teach in a public school preschool and kindergarten or the primary grades will have to pass the state certification test in both content area knowledge and professional knowledge.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* Changes in Arizona state certification will require all individuals teaching in public schools, early childhood programs and serving children birth through kindergarten to meet new early childhood certification or endorsement requirements by 2009. According to a policy study on the condition of early childhood education in 2005, the demand for early childhood teachers in Arizona is much greater than the current supply. Thus, job opportunities in center-based programs and public school early childhood programs are numerous. Many graduates with a degree in early childhood teaching and leadership hold leadership positions in Head Start, private nonprofit and private for-profit, center-based programs and public school early childhood centers. More than 98 percent of graduates accept employment offers within the first year of completing this program.

*Contact:*

Teacher Preparation, Division W  
<http://ctel.asu.edu/programs/>  
CTELquestions@asu.edu  
FAB S210-1  
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### **Elementary Education (BAE) TEEEDBAE**

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in elementary education program in the College of Teacher Education and Leadership is available on all campuses. This program offers students a firm grounding in academic content with current research and best practices, accompanied by real-world classroom experiences. Students engage in field experiences and internships that align with their elementary education academic program. The faculty members in the program are experienced in working successfully with first-generation college students.

All students graduate from the program with extensive experience in integrating technology into teaching and a provisional endorsement to work with English language learners. Students who complete the B.A.E. in elementary education are

recommended for grades one-eight teacher certification. All graduates of this program will have to pass a state certification test in content area knowledge and professional knowledge.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* According to recent research on teacher supply and demand, the demand for well-prepared elementary education teachers is strong. Job opportunities in a fast growing state such as Arizona are numerous. Demand for elementary teachers will continue to be strong. Many graduates with a degree in elementary education work in public elementary schools, charter schools and in private school settings. More than 98 percent of graduates accept employment offers within the first year of completing this program.

*Contact:*

Teacher Preparation, Division W  
<http://ctel.asu.edu/programs/>  
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### **Elementary Education (English as a Second Language) (BAE) TEESLBAE**

College of Teacher Education and Leadership

*Program Description:* The elementary education, diversity in languages and literature with an English as a second language endorsement program in the College of Teacher Education and Leadership is available at all four campuses. This program is designed to give students a firm grounding in academic content with current research and best practices, accompanied by real-world classroom experiences. Students are engaged in field experiences and internships that align with their English as a second language program. This program requires six credit hours of a foreign language or its equivalent and will enable the student to work with second-language learners.

Students who complete the B.A.E. in elementary education, diversity in languages and literature with an English as a second language endorsement are recommended for grades one-eight teacher certification. All graduates of this program will have to pass the state certification test in content area knowledge and professional knowledge.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* According to recent studies on teacher supply and demand, the demand for well-prepared elementary education teachers is strong. Job opportunities in a fast growing state such as Arizona are numerous. Students seeking endorsements in bilingual and English as a second language will find that demand is great in these areas. Many graduates with a degree in elementary education work in public elementary schools, charter schools and in private school

settings. More than 98 percent of graduates receive employment offers within the first year of completing this program.

*Contact:*

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**Secondary Education (Biological Sciences) (BAE) TEBIOBAE**

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in secondary education program prepares educators who wish to teach students in seventh through 12th grade. While students develop a strong theoretical background, the program focuses on developing the requisite teaching knowledge and abilities to be a successful middle or high school teacher. In order to integrate teacher education preparation with the secondary education requirement for an academic specialization, the College of Teacher Education and Leadership maintains connections with academic departments across the university. Internships are required in the schools, and some courses are taught in the field.

Secondary Education-Biological Sciences is offered in its entirety on ASU's Tempe, West, and Polytechnic campus. Students have the option to take the Professional Teacher Preparation Program courses at any of the four campuses (Downtown, Polytechnic, Tempe and West) as well as general studies courses that are part of this curriculum. Please consult with an Academic Success Specialist for additional information.(/p)

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates of this program have a 95 percent placement rate for secondary education teaching positions within the first year. While there is a demand for all teachers due to the retirement of the workforce and increased population growth, the highest demand is for teachers of mathematics and science. The career of teaching offers rich personal rewards. The fiscal compensation, although not as high as some other fields, has been increasing and the benefits are strong. Many other states accept Arizona certification through reciprocity agreements.

*Contact:*

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## Secondary Education (Business) (BAE) EDBUSBAE

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in secondary education program prepares educators who wish to teach students in seventh through 12th grade. While students develop a strong theoretical background, the program focuses on developing the requisite teaching knowledge and abilities to be a successful middle or high school teacher. In order to integrate teacher education preparation with the secondary education requirement for an academic specialization, the College of Teacher Education and Leadership maintains connections with academic departments across the university. Internships are required in the schools, and some courses are taught in the field.

Secondary Education-Business is offered primarily on ASU's Tempe campus. Students have the option to take the Professional Teacher Preparation Program courses at any of the four campuses (Downtown, Polytechnic, Tempe and West), as well as general studies courses that are part of this curriculum. A limited portion of specialization courses are also offered at the Downtown and West campus. Please consult with an academic success specialist for additional information.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates are recommended for secondary teacher certification in grades seven to 12 in an area of academic specialization:

- Art.
- Biological sciences.
- Business.
- Chemistry.
- Dance.
- Earth and space sciences.
- Economics.
- English.
- French.
- Geography.
- German.
- History.
- Japanese.
- Mathematics.
- Music, choral.
- Music, instrumental.
- Physics.
- Political science.
- Social studies.
- Spanish.

Students in art, music and dance complete a K-12 endorsement in their field.

*Contact:*

Teacher Preparation, Division W  
<http://ctel.asu.edu/programs>  
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**Secondary Education (Chemistry) (BAE) TECHMBAE**

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in secondary education program prepares educators who wish to teach students in seventh through 12th grade. While students develop a strong theoretical background, the program focuses on developing the requisite teaching knowledge and abilities to be a successful middle or high school teacher. In order to integrate teacher education preparation with the secondary education requirement for an academic specialization, the College of Teacher Education and Leadership maintains connections with academic departments across the university. Internships are required in the schools, and some courses are taught in the field.

Secondary Education (Chemistry) is offered in its entirety on ASU's Tempe campus. Students have the option to take the Professional Teacher Preparation Program courses at any of the four campuses (Downtown, Polytechnic, Tempe and West), as well as general studies courses that are part of this curriculum. Please consult with an Academic Success Specialist for additional information.

*Language Requirement:* N | *Program Fee:* N

*Contact:*

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**Secondary Education (Earth & Space Sciences) (BAE) EDESSBAE**

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in secondary education program prepares educators who wish to teach students in seventh through 12th grade. While students develop a strong theoretical background, the program focuses on developing the requisite teaching knowledge and abilities to be a successful middle or high school teacher. In order to integrate teacher education preparation with the secondary education requirement for an academic specialization, the College of Teacher Education and Leadership maintains connections with academic

departments across the university. Internships are required in the schools, and some courses are taught in the field.

Secondary Education (Earth and Space Sciences) is offered in its entirety on ASU's Tempe campus. Students have the option to take the Professional Teacher Preparation Program courses at any of the four campuses (Downtown, Polytechnic, Tempe and West), as well as general studies courses that are part of this curriculum. Please consult with an Academic Success Specialist for additional information.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* Graduates are recommended for secondary teacher certification in grades seven to 12 in an area of academic specialization:

- Art.
- Biological sciences.
- Business.
- Chemistry.
- Dance.
- Earth and space sciences.
- Economics.
- English.
- French.
- Geography.
- German.
- History.
- Japanese.
- Mathematics.
- Music, choral.
- Music, instrumental.
- Physics.
- Political science.
- Social studies.
- Spanish.

Students in art, music and dance complete a K-12 endorsement in their field.

*Contact:*

Teacher Preparation, Division W

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602/543-6354

**Secondary Education (Economics) (BAE) EDECNBAE**

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in secondary education program prepares educators who wish to teach students in seventh through 12th grade. While students develop a strong theoretical background, the program focuses on developing the requisite teaching knowledge and abilities to be a successful middle or high school teacher. In order to integrate teacher education preparation with the secondary education requirement for an academic specialization, the College of Teacher Education and Leadership maintains connections with academic departments across the university. Internships are required in the schools, and some courses are taught in the field.

Secondary Education(Economics) is offered primarily on ASU's Tempe campus. Students have the option to take the Professional Teacher Preparation Program courses at any of the four campuses (Downtown, Polytechnic, Tempe and West), as well as general studies courses that are part of this curriculum. A limited portion of specialization courses are also offered at the Downtown and West campus. Please consult with an Academic Success Specialist for additional information.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates are recommended for secondary teacher certification in grades seven to 12 in an area of academic specialization:

- Art.
- Biological sciences.
- Business.
- Chemistry.
- Dance.
- Earth and space sciences.
- Economics.
- English.
- French.
- Geography.
- German.
- History.
- Japanese.
- Mathematics.
- Music, choral.
- Music, instrumental.
- Physics.
- Political science.
- Social studies.
- Spanish.

Students in art, music and dance complete a K-12 endorsement in their field.

*Contact:*

Teacher Preparation, Division W  
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**Secondary Education (English) (BAE) TEENGBAE**

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in secondary education program prepares educators who wish to teach students in seventh through 12th grade. While students develop a strong theoretical background, the program focuses on developing the requisite teaching knowledge and abilities to be a successful middle or high school teacher. In order to integrate teacher education preparation with the secondary education requirement for an academic specialization, the College of Teacher Education and Leadership maintains connections with academic departments across the university. Internships are required in the schools, and some courses are taught in the field

Secondary Education (English) is offered in its entirety on the Tempe, West, and Polytechnic campuses. A portion of specialization courses are also available at the Downtown Campus. Students have the option to take the Professional Teacher Preparation Program courses at any of the four campuses (Downtown, Polytechnic, Tempe and West), as well as general studies courses that are part of this curriculum. Please consult with an Academic Success Specialist for additional information.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates of this program have a 95 percent placement rate for secondary education teaching positions within the first year. While there is a demand for all teachers due to the retirement of the workforce and increased population growth, the highest demand is for teachers of mathematics and science. The career of teaching offers rich personal rewards. The fiscal compensation, although not as high as some other fields, has been increasing and the benefits are strong. Many other states accept Arizona certification through reciprocity agreements.

*Contact:*

Teacher Preparation, Division W  
<http://ctel.asu.edu/programs/>  
CTELquestions@asu.edu  
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602/543-6354

**Secondary Education (French) (BAE) EDFREBAE**

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in secondary education program prepares educators who wish to teach students in seventh through 12th grade. While students develop a strong theoretical background, the program focuses on developing the requisite teaching knowledge and abilities to be a successful middle or high school teacher. In order to integrate teacher education preparation with the secondary education requirement for an academic specialization, the College of Teacher Education and Leadership maintains connections with academic departments across the university. Internships are required in the schools, and some courses are taught in the field.

Secondary Education (French) is offered in its entirety on ASU's Tempe campus. Students have the option to take the Professional Teacher Preparation Program courses at any of the four campuses (Downtown, Polytechnic, Tempe and West), as well as general studies courses that may be available that are part of this curriculum. A limited portion of specialization courses are also offered at the Downtown campus. Please consult with an academic success specialist for additional information.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates are recommended for secondary teacher certification in grades seven to 12 in an area of academic specialization:

- Art.
- Biological sciences.
- Business.
- Chemistry.
- Dance.
- Earth and space sciences.
- Economics.
- English.
- French.
- Geography.
- German.
- History.
- Japanese.
- Mathematics.
- Music, choral.
- Music, instrumental.
- Physics.
- Political science.
- Social studies.
- Spanish.

Students in art, music and dance complete a K-12 endorsement in their field.

*Contact:*

Teacher Preparation, Division W

<http://ctel.asu.edu/programs>

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FAB S210-1

602/543-6354

**Secondary Education (Geography) (BAE) EDGCUBAE**

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in secondary education program prepares educators who wish to teach students in seventh through 12th grade. In order to integrate teacher education preparation with the secondary education requirement for an academic specialization, the College of Teacher Education and Leadership maintains connections with academic departments across the university. Internships are required in the schools, and some courses are taught in the field.

Secondary Education (Geography) is offered in its entirety on ASU's Tempe campus. Students have the option to take the Professional Teacher Preparation Program courses at any of the four campuses (Downtown, Polytechnic, Tempe and West), as well as general studies courses that are part of this curriculum. Please consult with an Academic Success Specialist for additional information.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates are recommended for secondary teacher certification in grades seven to 12 in an area of academic specialization:

- Art.
- Biological sciences.
- Business.
- Chemistry.
- Dance.
- Earth and space sciences.
- Economics.
- English.
- French.
- Geography.
- German.
- History.
- Japanese.
- Mathematics.
- Music, choral.
- Music, instrumental.
- Physics.
- Political science.

- Social studies.
- Spanish.

Students in art, music and dance complete a K-12 endorsement in their field.

*Contact:*

Teacher Preparation, Division W  
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**Secondary Education (German) (BAE) EDGERBAE**

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in secondary education program prepares educators who wish to teach students in seventh through 12th grade. While students develop a strong theoretical background, the program focuses on developing the requisite teaching knowledge and abilities to be a successful middle or high school teacher. In order to integrate teacher education preparation with the secondary education requirement for an academic specialization, the College of Teacher Education and Leadership maintains connections with academic departments across the university. Internships are required in the schools, and some courses are taught in the field.

Secondary Education (German) is offered in its entirety on ASU's Tempe campus. Students have the option to take the Professional Teacher Preparation Program courses at any of the four campuses (Downtown, Polytechnic, Tempe and West), as well as general studies courses that may be available that are part of this curriculum. A limited portion of specialization courses are also offered at the Downtown campus. Please consult with an academic success specialist for additional information.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates are recommended for secondary teacher certification in grades seven to 12 in an area of academic specialization:

- Art.
- Biological sciences.
- Business.
- Chemistry.
- Dance.
- Earth and space sciences.
- Economics.
- English.
- French.

- Geography.
- German.
- History.
- Japanese.
- Mathematics.
- Music, choral.
- Music, instrumental.
- Physics.
- Political science.
- Social studies.
- Spanish.

Students in art, music and dance complete a K-12 endorsement in their field.

*Contact:*

Teacher Preparation, Division W  
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**Secondary Education (History) (BAE) TEHISBAE**

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in secondary education program prepares educators who wish to teach students in seventh through 12th grade. While students develop a strong theoretical background, the program focuses on developing the requisite teaching knowledge and abilities to be a successful middle or high school teacher. In order to integrate teacher education preparation with the secondary education requirement for an academic specialization, the College of Teacher Education and Leadership maintains connections with academic departments across the university. Internships are required in the schools, and some courses are taught in the field.

Secondary Education (History) is offered in its entirety on ASU's Tempe, West, and Polytechnic campuses. A portion of specialization courses are also available at the Downtown Campus. Students have the option to take the Professional Teacher Preparation Program courses at any of the four campuses (Downtown, Polytechnic, Tempe and West), as well as general studies courses that are part of this curriculum. Please consult with an academic success specialist for additional information.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates of this program have a 95 percent placement rate for secondary education teaching positions within the first year. While there is a demand for all teachers due to the retirement of the workforce and increased

population growth, the highest demand is for teachers of mathematics and science. The career of teaching offers rich personal rewards. The fiscal compensation, although not as high as some other fields, has been increasing and the benefits are strong. Many other states accept Arizona certification through reciprocity agreements.

*Contact:*

Teacher Preparation, Division W  
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**Secondary Education (Japanese) (BAE) EDJPNBAE**

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in secondary education program prepares educators who wish to teach students in seventh through 12th grade. While students develop a strong theoretical background, the program focuses on developing the requisite teaching knowledge and abilities to be a successful middle or high school teacher. In order to integrate teacher education preparation with the secondary education requirement for an academic specialization, the College of Teacher Education and Leadership maintains connections with academic departments across the university. Internships are required in the schools, and some courses are taught in the field.

Secondary Education (Japanese) is offered in its entirety on ASU's Tempe campus. Students have the option to take the Professional Teacher Preparation Program courses at any of the four campuses (Downtown, Polytechnic, Tempe and West), as well as general studies courses that are part of this curriculum. Please consult with an Academic Success Specialist for additional information.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates are recommended for secondary teacher certification in grades seven to 12 in an area of academic specialization:

- Art.
- Biological sciences.
- Business.
- Chemistry.
- Dance.
- Earth and space sciences.
- Economics.
- English.
- French.
- Geography.

- German.
- History.
- Japanese.
- Mathematics.
- Music, choral.
- Music, instrumental.
- Physics.
- Political science.
- Social studies.
- Spanish.

Students in art, music and dance complete a K-12 endorsement in their field.

*Contact:*

Teacher Preparation, Division W  
<http://ctel.asu.edu/programs>  
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**Secondary Education (Mathematics) (BAE) TEMATBAE**

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in secondary education program prepares educators who wish to teach students in seventh through 12th grade. While students develop a strong theoretical background, the program focuses on developing the requisite teaching knowledge and abilities to be a successful middle or high school teacher. In order to integrate teacher education preparation with the secondary education requirement for an academic specialization, the College of Teacher Education and Leadership maintains connections with academic departments across the university. Internships are required in the schools, and some courses are taught in the field.

Secondary Education (Mathematics) is offered in its entirety on ASU's Tempe and West campus. Students have the option to take the Professional Teacher Preparation Program courses at any of the four campuses (Downtown, Polytechnic, Tempe and West), as well as general studies courses that are part of this curriculum. Please consult with an Academic Success Specialist for additional information.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates of this program have a 95 percent placement rate for secondary education teaching positions within the first year. While there is a demand for all teachers due to the retirement of the workforce and increased population growth, the highest demand is for teachers of mathematics and science. The career of teaching offers rich personal rewards. The fiscal compensation, although not as high as some other fields, has been increasing and the benefits are

strong. Many other states accept Arizona certification through reciprocity agreements.

*Contact:*

Teacher Preparation, Division W  
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**Secondary Education (Natural Sciences) (BAE) TENSABAE**

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in secondary education program prepares educators who wish to teach students in seventh through 12th grade. While students develop a strong theoretical background, the program focuses on developing the requisite teaching knowledge and abilities to be a successful middle or high school teacher. In order to integrate teacher education preparation with the secondary education requirement for an academic specialization, the College of Teacher Education and Leadership maintains connections with academic departments across the university. Internships are required in the schools, and some courses are taught in the field.

Secondary Education (Natural Sciences) is offered in its entirety on ASU's West and Tempe campuses. Students have the option to take the Professional Teacher Preparation Program courses at any of the four campuses (Downtown, Polytechnic, Tempe and West), as well as general studies courses that are part of this curriculum. A portion of specialization courses can be completed at the Downtown campus. Please consult with an Academic Success Specialist for additional information.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates of this program have a 95 percent placement rate for secondary education teaching positions within the first year. While there is a demand for all teachers due to the retirement of the workforce and increased population growth, the highest demand is for teachers of mathematics and science. The career of teaching offers rich personal rewards. The fiscal compensation, although not as high as some other fields, has been increasing and the benefits are strong. Many other states accept Arizona certification through reciprocity agreements.

*Contact:*

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## Secondary Education (Physical Education) (BAE) ECPPEBAE

College of Teacher Education and Leadership

*Program Description:* The physical education concentration under the B.A.E. in secondary education prepares future teachers to delivery quality K-12 physical education programs. This program is unique in its practice-oriented focus on intensive field experiences, practical application of current knowledge, a field-tested and widely used curriculum and classroom management model, and an emphasis on current technology. The curriculum directly aligns with Arizona's standards for teachers and the National Association for Sport and Physical Education's beginning teacher standards.

During the first two years of the program, students explore education as a career field and gain experience in local community schools and agencies. During the final two years, students complete content specific teaching methodology courses and intensive field experiences at both the elementary and secondary levels. Course instructors use their experience teaching in a variety of K-12 settings and coaching environments to augment class experiences with many practical applications.

Secondary Education (Physical Education) is offered in its entirety on ASU's Polytechnic campus. Please consult with an Academic Success Specialist for additional information on this major

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students will be admitted to the preprofessional status and must complete additional requirements for entrance to the professional status. See department web site for more information.

*Career Opportunities:* The physical education program prepares educators who wish to teach in kindergarten through 12th grade and related professions in the broader discipline. Students receive a secondary teaching certificate with a K-12 endorsement for physical education. School districts often offer additional stipends for coaching sport teams, English as a second language, and bilingual education endorsements, extracurricular activities and administrative responsibilities. With advanced training, graduates can pursue careers in a range of areas including school administration, instructional design, special education, counseling and sports administration.

### *Contact:*

Teacher Preparation, Division W  
<http://ctel.asu.edu/programs/polytechniceducation@asu.edu>  
SANCA 140  
480/727-1103

## Secondary Education (Physics) (BAE) EDPHYBAE

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in secondary education program prepares educators who wish to teach students in seventh through 12th grade. While students develop a strong theoretical background, the program focuses on developing the requisite teaching knowledge and abilities to be a successful middle or high school teacher. In order to integrate teacher education preparation with the secondary education requirement for an academic specialization, the College of Teacher Education and Leadership maintains connections with academic departments across the university. Internships are required in the schools, and some courses are taught in the field.

Secondary Education (Physics) is offered entirely on ASU's Tempe campus. Students have the option to take the Professional Teacher Preparation Program courses at any of the four campuses (Downtown, Polytechnic, Tempe and West), as well as general studies courses that are part of this curriculum. Please consult with an Academic Success Specialist for additional information.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates are recommended for secondary teacher certification in grades seven to 12 in an area of academic specialization:

- Art.
- Biological sciences.
- Business.
- Chemistry.
- Dance.
- Earth and space sciences.
- Economics.
- English.
- French.
- Geography.
- German.
- History.
- Japanese.
- Mathematics.
- Music, choral.
- Music, instrumental.
- Physics.
- Political science.
- Social studies.
- Spanish.

Students in art, music and dance complete a K-12 endorsement in their field.

*Contact:*

Teacher Preparation, Division W  
<http://ctel.asu.edu/programs/>  
CTELquestions@asu.edu  
FAB S210-1  
602/543-6354

**Secondary Education (Political Science) (BAE) EDPOSBAE**

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in secondary education program prepares educators who wish to teach students in seventh through 12th grade. In order to integrate teacher education preparation with the secondary education requirement for an academic specialization, the College of Teacher Education and Leadership maintains connections with academic departments across the university. Internships are required in the schools, and some courses are taught in the field.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates are recommended for secondary teacher certification in grades seven to 12 in an area of academic specialization:

- Art.
- Biological sciences.
- Business.
- Chemistry.
- Dance.
- Earth and space sciences.
- Economics.
- English.
- French.
- Geography.
- German.
- History.
- Japanese.
- Mathematics.
- Music, choral.
- Music, instrumental.
- Physics.
- Political science.
- Social studies.
- Spanish.

Students in art, music and dance complete a K-12 endorsement in their field.

*Contact:*

Teacher Preparation, Division W

<http://education.asu.edu/about/oss.dot>  
education@asu.edu  
ED L1-13  
480/965-5555

### **Secondary Education (Social Studies) (BAE) EDSSTBAE**

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in secondary education program prepares educators who wish to teach students in seventh through 12th grade. In order to integrate teacher education preparation with the secondary education requirement for an academic specialization, the College of Teacher Education and Leadership maintains connections with academic departments across the university. Internships are required in the schools, and some courses are taught in the field.

Minimum Math Requirement: MAT 142 - College Mathematics

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates are recommended for secondary teacher certification in grades seven to 12 in an area of academic specialization:

- Art.
- Biological sciences.
- Business.
- Chemistry.
- Dance.
- Earth and space sciences.
- Economics.
- English.
- French.
- Geography.
- German.
- History.
- Japanese.
- Mathematics.
- Music, choral.
- Music, instrumental.
- Physics.
- Political science.
- Social studies.
- Spanish.

Students in art, music and dance complete a K-12 endorsement in their field.

*Contact:*

Teacher Preparation, Division W  
<http://education.asu.edu/about/oss.dot>  
education@asu.edu  
ED L1-13  
480/965-5555

**Secondary Education (Spanish) (BAE) TESPABAE**

College of Teacher Education and Leadership

Not accepting applications.

*Program Description:* The Department of Secondary Education in the College of Teacher Education in Leadership offers a three-semester professional program leading to a degree in Secondary Education. In addition, students may complete one of seven secondary specializations at the West or Downtown Phoenix campuses: biological sciences, English, history, mathematics, natural sciences, social studies, and Spanish. While students develop a strong theoretical background, the program focuses on developing the requisite teaching knowledge and abilities to be a successful middle or high school teacher. Students who successfully complete the required course work and student teaching are recommended for Arizona secondary education certification, grades 7-12.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates of this program have a 95% placement rate for secondary education teaching positions within the first year. While there is a demand for all teachers due to the retirement of the workforce and increased population growth, the highest demand is for teachers of mathematics and science. The career of teaching offers rich personal rewards. The fiscal compensation, although not as high as some other fields, has been increasing and the benefits are strong. Many other states accept Arizona certification through reciprocity agreements.

*Contact:*

<http://ctel.asu.edu/programs/>  
FAB S5251A  
CTELquestions@asu.edu  
602/543-6445

**Selected Studies (BAE) EDSLSTBAE**

Program information not available at time of publication.

Not accepting applications.

*Contact Information:*

College of Teacher Education and Leadership  
<http://ctel.asu.edu/programs/>

FAB S5251A  
CTELquestions@asu.edu  
602/543-6445

### **Special Education (BAE) TESPEBAE**

College of Teacher Education and Leadership

*Program Description:* The B.A.E. in special education in the College of Teacher Education and Leadership is available at the West and Downtown Phoenix campuses. Special education for children and adolescents with diverse learning needs is viewed as a service not a place. Our primary goals are to prepare teachers to provide a variety of educational options based on individual needs and to design curriculum based on the whole child in the context of their family, culture, community and learning needs.

Because the general education classroom is a viable placement option for many students with mild and moderate learning and behavior disabilities, teaching special education teachers to collaborate is emphasized throughout the professional preparation sequence. Students receive additional training in using interpersonal communication and problem-solving skills. They also learn adaptive techniques and about assistive technologies that facilitate the successful integration of students with diverse leaning needs in general education classrooms.

This is a dual-certificate program which leads to certification in both special education in mild cross-categorical disabilities and first through eighth grade elementary education.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* National and state studies report the current and projected need over the next 5-10 years will be foremost for special education teachers. Graduates of the B.A.E. in special education program will be eligible to teach kindergarten through grade 12 for the spectrum of mild disabilities (learning disabilities, behavior disabilities and mild mental retardation) in cross-categorical special education classes. In general education classes, graduates serve in resource rooms and self-contained classes as itinerant teachers, consulting teachers and co-teachers. Graduates also have the opportunity to consult with governmental agencies, curriculum publishers and parent organizations.

*Contact:*

Teacher Preparation, Division W  
<http://ctel.asu.edu/programs/>  
CTELquestions@asu.edu  
FAB S210-1  
602/543-6354

## Technology and Innovation, College of

### Aeronautical Management Technology (Air Transportation Management) (BS) TSAMTMBS

College of Technology and Innovation

*Program Description:* The air transportation management concentration, under the B.S. in aeronautical management technology, provides students with a thorough technical background combined with an interdisciplinary general university education. The student gains a background in aircraft structures, reciprocating and turbine engines, aircraft performance and design, management skills, business principles, systems analysis and a variety of course work specific to aircraft flight, airport operations and air transportation systems. The Aviation Accreditation Board International accredits this program.

*Language Requirement:* N | *Program Fee:* Y

*Career Opportunities:* A degree in air transportation management prepares graduates for careers as air traffic control specialist, air carrier manager, airport manager and general aviation operations manager. To facilitate career options, the student selects a focus area in either air carrier management or airport management.

*Contact:*

Department of Technology Management  
<http://technology.asu.edu/aviation>  
aerotech@asu.edu  
SIM BLDG  
480/727-1381

### Aeronautical Management Technology (Professional Flight) (BS) TSAMTFBS

College of Technology and Innovation

*Program Description:* The professional flight concentration, under the B.S. in aeronautical management technology, is designed for students who are seriously interested in becoming professional airline pilots. This program combines a thorough technical education with an interdisciplinary general university education. This combination prepares graduates to assume responsibilities in a wide variety of technically related areas within professional aviation flight operations. The concentration features flight instruction as a curriculum requirement and an airline bridge training program with Mesa Airlines. The Aviation Accreditation Board International accredits this program. The Federal Aviation Administration (FAA) certifies flight instruction.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* This major has additional admission requirements including Federal Aviation Administration requirements. Students will be admitted

to the pre-professional status and then complete additional requirements for admission to the professional program. See <http://eastair.poly.asu.edu/> for more information.

*Career Opportunities:* The professional flight concentration offers students private pilot, commercial pilot and flight instructor certificates, and instrument pilot, instrument instructor and multiengine pilot ratings. With these flight qualifications and the technically based bachelor's degree, the graduate has a wide variety of career opportunities, including flight crew service on commercial and business aircraft.

*Contact:*

Department of Technology Management  
<http://technology.asu.edu/aviation>  
aerotech@asu.edu  
SIM BLDG  
480/727-1381

**Air Traffic Management (BS) TSATMBS**

College of Technology and Innovation

*Program Description:* Air traffic control specialists guide aircraft to ensure a safe, orderly and expeditious flow of aircraft traffic both on the ground and in the air. The B.S. in air traffic management is designed to provide a technical foundation in air traffic control procedures and operations. Students gain a background in aircraft operations, management skills and business principles through a variety of course work specific to air traffic control. This program is designed for students who are seriously interested in becoming air traffic controllers.

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* This major has additional admission requirements including Federal Aviation Administration requirements. Students who do not have US citizenship status cannot be admitted to the program. Students will be admitted to the pre-professional status and then complete additional requirements for admission to the professional program. See [www.poly.asu.edu/aviation](http://www.poly.asu.edu/aviation) for more information.

*Career Opportunities:* It is estimated that the Federal Aviation Administration (FAA) will hire approximately 15,000 air traffic controllers in the next 10 years. Increases in the volume of air traffic will require more controllers to handle the additional work. New computerized systems will assist controllers by automatically making many of the routine decisions. This will allow controllers to handle more traffic, thus increasing their productivity. Despite the obvious demand for new controllers in the immediate future, competition to get into the FAA-approved training programs is expected to remain intense, as there generally are many more applicants than there are openings. However, graduates from this program have an excellent opportunity of being hired as air traffic controllers.

*Contact:*

Department of Technology Management  
<http://technology.asu.edu/aviation>  
dtm@asu.edu  
SIM BLDG  
480/727-1381

**Applied Biological Sciences (Applied Biological Sciences) (BS) TSABSABS**

College of Technology and Innovation

*Program Description:* The applied biological sciences concentration, under the B.S. in applied biological sciences, focuses on the application of biological principles to challenges in the life sciences. This concentration is designed for students that have strong interests in the life sciences and the interaction of these sciences with the ecosystem and human society within the ecosystem. Mastery of fundamental biological principles is emphasized through classroom learning and hands-on activities in laboratories and in the living laboratories of the Sonoran desert, the surrounding ecosystems and the landscape of the greater Phoenix area.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates can pursue entry-level careers in wildlife and restoration ecology, urban horticulture, and secondary education.

The general program in applied biological sciences also prepares graduates to succeed in graduate and professional schools in disciplines such as animal health, environmental biotechnology, medicine, dentistry, physical therapy, ecology, horticulture, veterinary medicine and wildlife biology.

*Contact:*

Department of Applied Biological Sciences  
<http://www.poly.asu.edu/saas/appliedbiologicalsciences/>  
appliedbiologicalsciences@asu.edu  
WANER 340  
480/727-1444

**Applied Biological Sciences (Secondary Education in Biology) (BS) TSABSSBS**

College of Technology and Innovation

*Program Description:* The secondary education in biology concentration of the B.S. in applied biological sciences qualifies students for State of Arizona Certification in Secondary Biology Education. Students in this program will have advisors in both the Department of Applied Biological Sciences and the School of Educational Innovation and Teacher Preparation.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates can pursue numerous entry-level careers in biology. Specific career fields include secondary education, wildlife and restoration ecology and urban horticulture. Numerous employment opportunities exist in both private and public sectors. The general program in applied biological sciences also prepares graduates to succeed in graduate or professional schools in disciplines such as animal health, environmental biotechnology, medicine, dentistry, physical therapy, ecology, horticulture and wildlife biology.

*Contact:*

Department of Applied Biological Sciences  
<http://www.poly.asu.edu/saas/appliedbiologicalsciences/>  
appliedbiologicalsciences@asu.edu  
WANER 340  
480/727-1444

**Applied Biological Sciences (Urban Horticulture) (BS) TSABSUBS**

College of Technology and Innovation

*Program Description:* The urban horticulture concentration, under the B.S. in applied biological sciences degree, emphasizes the relationship of plants and people in city environments. Set in a unique southwestern desert location, the program teaches students how to practice urban horticulture principles and develop skills that help to create aesthetically pleasing urban environments. This approach is coupled with an appreciation of environmental conservation and stewardship.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates can pursue numerous entry-level careers in biology. Specific career fields include secondary education, wildlife and restoration ecology and urban horticulture. Numerous employment opportunities exist in both private and public sectors. The general program in applied biological sciences also prepares graduates to succeed in graduate or professional schools in disciplines such as animal health, environmental biotechnology, medicine, dentistry, physical therapy, ecology, horticulture and wildlife biology.

*Contact:*

Department of Applied Biological Sciences  
<http://www.poly.asu.edu/saas/appliedbiologicalsciences/>  
appliedbiologicalsciences@asu.edu  
WANER 340  
480/727-1444

**Applied Biological Sciences (Wildlife & Restoration Ecology) (BS) TSABSRBS**

College of Technology and Innovation

*Program Description:* The wildlife and restoration ecology concentration, under the B.S. in applied biological sciences degree, focuses on the application of ecological principles to the management of wildlife and the restoration of ecosystems. The

concentration examines the management of wildlife species and their habitat. The reconstruction of degraded ecosystems, to improve ecological structure and function and meet societal needs for sustainable and functional ecosystems, is also emphasized.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates can pursue numerous entry-level careers in biology. Specific career fields include secondary education, wildlife and restoration ecology and urban horticulture. Numerous employment opportunities exist in both private and public sectors. The general program in applied biological sciences also prepares graduates to succeed in graduate or professional schools in disciplines such as animal health, environmental biotechnology, medicine, dentistry, physical therapy, ecology, horticulture and wildlife biology.

*Contact:*

Department of Applied Biological Sciences  
<http://www.poly.asu.edu/saas/appliedbiologicalsciences/>  
[appliedbiologicalsciences@asu.edu](mailto:appliedbiologicalsciences@asu.edu)  
WANER 340  
480/727-1444

### **Applied Computer Science (BS) TSAC SBS**

College of Technology and Innovation

*Program Description:* The B.S in applied computer science is designed to provide students with an education that targets the computing profession. Computer scientists use mathematics, science and economics along with technological knowledge and skill in the application of programming languages and software processes to design, analyze, implement and test software systems and applications. The program is problem- and project-based, utilizing the languages, tools and methods of computing best practices.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates find opportunities as members of an engineering team in software applications areas such as Web, database, limited device (cell phones) or network and security. The current demand for software and computer hardware personnel is high, and the starting salaries for these employees are typically well above the average.

*Contact:*

Department of Engineering  
<http://technology.asu.edu/engineering/>  
[egr@asu.edu](mailto:egr@asu.edu)  
SANTN 230  
602/727-2727

### **Applied Psychology (BS) ECPSYBS**

College of Technology and Innovation

*Program Description:* This major offers a traditional psychology core preparation, leading to graduate school and/or to applications in human factors with emphasis on human-computer interaction, aviation and manufacturing. The rigor of the major provides strong preparation for further graduate study in psychology. The program serves students in other Polytechnic campus programs, such as manufacturing engineering technology, aviation management technology, industrial technology and business administration.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Most careers in psychology require a master's or a Ph.D., but there are some opportunities for employment in applied areas with good training at the undergraduate level. Such positions may involve working as a research assistant or working in some aspect of human factors. For example, there is a pressing need for people who can help evaluate and improve the usability of products and software. Have you ever had difficulty using a Web site? These sites can be improved by considering the way people think. The applied psychology program aims to provide the background and skills necessary to assist in such work.

*Contact:*

Faculty of Applied Psychology  
<http://www.poly.asu.edu/saas/appliedpsych/>  
SAAS@asu.edu  
SANCA 150  
480/727-1177

### **Applied Science (BAS) TSAPSBAS**

College of Technology and Innovation

*Program Description:* The B.A.S. program has a flexible degree plan designed specifically for students who have earned an A.A.S from a community college. This major combines the technical experience gained in the student's associate degree program with a broader education of management, leadership, critical thinking and communication skills. Students in the B.A.S. program within the College of Technology and Innovation select a field of study from a list of numerous concentrations. These concentrations include:

- Aviation management technology.
- Electronic and energy systems.
- Emergency management.
- Graphic information technology.
- Internet and Web development.
- Manufacturing technology and management.
- Operations management.

- Software and computing systems.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students applying to this program must have completed an Associate of Applied Science (AAS) degree. This program is not available for freshmen.

*Career Opportunities:* The wide range of concentrations to choose from offer B.A.S. program graduates a great deal of diversity in terms of career opportunities. In general, course work provided by the B.A.S. program gives the graduate a broader understanding of what is required of a professional working in a technical area. B.A.S. graduates have the ability to supervise and manage people in highly specialized technical and service industry positions.

*Contact:*

Dean, College of Technology & Applied Sciences  
<http://technology.asu.edu>  
technology@asu.edu  
SANTN 330  
480/727-1089

### **Applied Science (Aviation Management Technology) (BAS) TSAMTABAS**

College of Technology and Innovation

*Program Description:* The B.A.S. programs are a flexible, 60-credit-hour degree designed specifically for students who have earned an A.A.S. from a regionally accredited institution.

The concentration in Aviation Management Technology is for students who have received training and education in some aspect of the air transportation industry (other than aviation maintenance), such as flight certificates and ratings as part of their A.A.S. degree. Students receive an orientation in management practices that prepares them for advanced positions in the aviation management field.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students applying to this program must have completed an Associate of Applied Science (A.A.S.) degree from a regionally accredited institution. Not available for freshmen.

*Contact:*

Department of Technology Management  
<http://technology.asu.edu/aviation>  
technology@asu.edu  
SIM BLDG  
480/727-1381

## Applied Science (Electronic & Energy Systems) (BAS) TSEESBAS

College of Technology and Innovation

*Program Description:* The B.A.S. program is a flexible, 60-credit-hour degree designed specifically for students who have earned an A.A.S. from a regionally accredited institution. The Department of Engineering Technology offers the Electronic and Energy Systems concentration to serve students with an electronics background by providing three paths or emphasis areas within this BAS concentration. These three emphasis areas are alternative energy, electronic systems, and integrated electronic systems (focused on the semiconductor industry).

The alternative energy technologies emphasis area explores the demands of various alternative energy resources. At the heart of the program is the solar-hydrogen cycle, a renewable energy scenario that comprises production of electricity from solar energy, and utilizing that electricity to split water into its elemental parts. Then, this program provides hands-on laboratory experience on energy conversion and storage technologies, including photovoltaics, fuel cells, batteries, electrolyzers and supercapacitors.

The electronic systems emphasis area allows students to continue to develop a knowledge of electrical/electronic fundamentals with an applications perspective and a focus on general topics of microcontrollers and advanced digital controllers and their use in industry.

The integrated electronic systems emphasis area covers the processes and technology used to develop, design, manufacture and exploit integrated electronic functions on silicon, in packages and on boards. The program provides hands-on laboratory experience in integrated circuit device fabrication and manufacturing in a setting that emulates the industry.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students applying to this program must have completed an Associate of Applied Science (A.A.S.) degree from a regionally accredited institution. Not available for freshmen.

*Career Opportunities:* Graduates with the alternative energy emphasis area are able to work in a number of different companies involved in alternative energy. These companies may be traditional energy production companies expanding into new production technologies or start-up companies involved in solar energy or fuel cells.

Graduates with the electronic systems emphasis area are able to work as members of engineering teams in applied design, product development, manufacturing, production or operations. They may also be employed in technical services capacities, including field engineering, marketing or sales.

Graduates with the integrated electronic systems emphasis area work in integrated circuit processing, testing, field applications and as system integrators.

*Contact:*

Dean, College of Technology & Applied Sciences  
engrtech@asu.edu  
TECH 101  
480/727-1584

**Applied Science (Emergency Management) (BAS) TSIMCEBAS**

College of Technology and Innovation

*Program Description:* The B.A.S. programs are a flexible, 60-credit-hour degree designed specifically for students who have earned an A.A.S. from a regionally accredited institution..The concentration in emergency management opens the door to a challenging career as a professional emergency manager. The advancement of technology has created the potential for more devastating disasters than ever before. As a result, there is an increasing demand for emergency managers who have a solid foundation in scientific and technical disciplines as well as management skills.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students applying to this program must have completed an Associate of Applied Science (A.A.S.) degree from a regionally accredited institution. Not available for freshmen.

*Contact:*

Department of Technology Management  
<http://etmonline.asu.edu/>  
TECH 102  
480/727-1100

**Applied Science (Graphic Information Technology) (BAS) TSGITBAS**

College of Technology and Innovation

*Program Description:* The B.A.S. programs are a flexible, 60-credit-hour degree designed specifically for students who have earned an A.A.S. from a regionally accredited institution. The concentration in Graphic Information Technology is designed to prepare graduates in the cross media graphic industry that includes: traditional printing and publishing, variable data printing, Internet and web development, commercial digital photography, engineering graphics, 3D modeling, multimedia, and animation.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students applying to this program must have completed an Associate of Applied Science (A.A.S.) degree from a regionally accredited institution. Not available for freshmen.

*Career Opportunities:* Graduates of the GIT program combine the technical course work with the management content to assume supervisory positions in industry such as: Production Manager, Designer, Web Developer, Commercial Photographer, Animation specialist, Quality Assurance Manager, Customer Service Representative, and Plant Manager.

*Contact:*

Dean, College of Technology & Applied Sciences  
<http://technology.asu.edu/git>  
DTM@asu.edu  
Technology Center 102  
480/727-1781

**Applied Science (Internet & Web Development) (BAS) TSIWDBAS**

College of Technology and Innovation

*Program Description:* The B.A.S. programs are a flexible, 60-credit-hour degree designed specifically for students who have earned an A.A.S. from a regionally accredited institution.

The concentration in Internet and Web development provides you with management, leadership, critical thinking and communication skills.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students applying to this program must have completed an Associate of Applied Science (A.A.S.) degree from a regionally accredited institution. Not available for freshmen.

*Career Opportunities:* The Technical Graphics option prepares graduates for positions in industries implementing technical and engineering graphics in Computer Aided Design and Computer Integrated Manufacturing.

The Web site design option prepares graduates for careers in the ever-expanding arena of Web site design and publishing. This degree is available as an entirely online degree program.

The Digital Publishing concentration prepares graduates for lead technical and entry-level management positions in the Printing and Publishing industry.

The Digital Media Management concentration prepares graduates for technical positions in industries implementing, planning, and producing interactive communications, integrated media, and multimedia for design, training, and marketing.

*Contact:*

Department of Technology Management  
<http://technology.asu.edu/git>  
ask.git@asu.edu  
TECH 102  
480/727-1781

**Applied Science (Manufacturing Technology & Management) (BAS) TSMETFBAS**  
College of Technology and Innovation

*Program Description:* The B.A.S. programs are a flexible, 60-credit-hour degree designed specifically for students who have earned an A.A.S. from a regionally accredited institution.

The manufacturing technology and management concentration under the B.A.S. program includes a series of manufacturing-related courses to provide a broad understanding of the complex world of manufacturing.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Students applying to this program must have completed an Associate of Applied Science (A.A.S.) degree from a regionally accredited institution. Not available for freshmen.

*Career Opportunities:* Typically, students who graduate with this B.A.S. concentration work in manufacturing, production or operations.

*Contact:*

Department of Engineering Technology  
<http://technology.asu.edu/engrtech>  
engrtech@asu.edu  
SIM 295  
480/727-1584

**Applied Science (Operations Management Technology) (BAS) TSIMCOBAS**  
College of Technology and Innovation

*Program Description:* The B.A.S. programs are a flexible, 60-credit-hour degree designed specifically for students who have earned an A.A.S. from a regionally accredited institution.

The concentration in operations management technology provides the tools needed for success as a manager. An effective manager is someone who can organize work, understands the work environment and can create a safe and healthful work environment, hires qualified workers that can do the job or can be trained/educated to perform the job, motivates and develops the workforce, effectively utilizes the resources available to create quality products and/or services and accomplishes his/her unit goals.

*Language Requirement: N | Program Fee: N*

*Admission Requirements:* Students applying to this program must have completed an Associate of Applied Science (A.A.S.) degree from a regionally accredited institution. Not available for freshmen.

*Career Opportunities:* The BAS in Operations Management Technology prepares undergraduate students for supervisory and management functions in industry, manufacturing, public service, and other service organizations.

*Contact:*

Department of Technology Management  
<http://technology.asu.edu/omt>  
ts@asu.edu  
TECH 102  
480/727-1781

### **Applied Science (Software & Computing Systems) TSCSTBAS**

College of Technology & Innovation

*Program Description:* The BAS program with a concentration in Software and Computing Systems is a 60-credit-hour degree designed specifically for students who have earned an AAS from a regionally accredited institution. Students are expected to have an AAS degree with coursework object-oriented programming, data structures, and microcomputer organization / assembly language programming. Students without this background will have to make up this background before they are prepared to enroll in upper-division major courses. Upper division coursework and laboratories are offered in two emphasis areas, culminating in a capstone senior project:

**Computer Systems Administration** This area is designed to broaden and provide more in-depth knowledge in networked computer systems. Graduates from this concentration will be prepared to specify, install, maintain and administer various computer-networking systems.

**Cyber Security** This area is designed to broaden and provide more in-depth knowledge in securing systems, intrusion detection and various other aspects of information assurance and cyber forensics. Graduates from this concentration will understand the various threats to computer-networking systems, and best practices for securing systems from these threats.

*Language Requirement: N | Program Fee: N*

*Admission Requirements:* Students applying to this program must have completed an Associate of Applied Science (A.A.S.) degree from a regionally accredited institution. Not available for freshmen.

*Career Opportunities:* The BAS degree exposes students to advanced concepts and critical thinking skills that prepare them for expanded career opportunities and professional advancement. Graduates from this concentration are especially prepared to work in systems administration and cybersecurity for internet and telecommunication companies, a wide variety of information technology providers and information technology centers within most midsize to large corporations. Demand for graduates with these skills continues to rise even while the job market in many other areas is stagnant or declining.

*Contact:*

Dean, College of Technology & Applied Sciences  
<http://technology.asu.edu/engineering>  
Santan Hall 230  
480/727-2727

**Computer Systems (Computer Hardware Technology) (BS) TSCSTHBS**

College of Technology and Innovation

*Program Description:* The computer hardware technology concentration, under the B.S. in computer systems, offers students the opportunity to develop knowledge and skills in the broad area of digital systems, computer hardware and computer network applications. Current computing industry needs drive the program's curriculum. The computer systems program uses mathematics, science and economics along with technological knowledge and skill in the application of programming languages, computer hardware, operating systems and networking to design, analyze, implement and test systems that integrate hardware and low-level software. The program is problem-based with exercises utilizing the languages, tools and methods of computing best practices.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates find employment opportunities as members of engineering teams working in computer hardware technology, systems development and system analysis. The current demand for highly trained software and computer hardware personnel is high, and the starting salaries for these employees are typically well above the average.

*Contact:*

Department of Engineering  
<http://technology.asu.edu/engineering/>  
[egr@asu.edu](mailto:egr@asu.edu)  
SANTN 230  
480/727-2727

**Computer Systems (Embedded Systems Technology) (BS) TSCSTMBS**

College of Technology and Innovation

*Program Description:* The embedded systems technology concentration, under the B.S. in computer systems, provides students with an opportunity to develop knowledge and skills in the broad area of digital systems, computer hardware and computer network applications. Current computing industry needs drive the program's curriculum. Computer systems uses mathematics, science and economics along with technological knowledge and skill in the application of programming languages, computer hardware, operating systems and networking to design, analyze, implement and test systems that integrate hardware and low-level software. The program is problem-based with exercises utilizing the languages, tools and methods of computing best practices.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates find employment opportunities as members of engineering teams working in computer embedded systems technology, systems development and system analysis. The current demand for highly trained software and computer hardware personnel is high, and the starting salaries for these employees are typically well above the average.

*Contact:*

Department of Engineering  
<http://technology.asu.edu/engineering/>  
egr@asu.edu  
SANTN 230  
480/727-2727

**Electronics Engineering Technology (Alternative Energy Technologies) (BS) TSEETABS**  
College of Technology and Innovation

*Program Description:* The alternative energy technologies concentration, under the B.S. in electronics engineering technology, explores the demands of energy resources in the new economy. This program strives to educate individuals in the use of energy sources such as solar, wind, ocean, geothermal and biomass. At the heart of the program is the concept of the solar-hydrogen cycle, an energy scenario that comprises production of electricity from solar energy, and utilizing electricity to split water into its elemental parts. This program provides hands-on laboratory experience on several energy conversion and storage technologies including photovoltaics, fuel cells, batteries, electrolyzers and supercapacitors.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The alternative energy technologies concentration is generally aimed at preparing graduates for careers in electric power conditioning, control systems, electronics and instrumentation. The specific positions might include system design, process control, application interface, technology analysis, policy analysis, environmental and reliability analysis.

*Contact:*

Department of Engineering Technology  
<http://technology.asu.edu/engrtech>  
engrtech@asu.edu  
TECH 101  
480/727-1584

**Electronics Engineering Technology (Electronic Systems) (BS) TSEETEBS**

College of Technology and Innovation

*Program Description:* The field of electronics engineering technology applies mathematics, science and economics, along with state-of-the-art electronics techniques, materials and devices to solve technological problems and to produce useful products. The concentration in electronic systems, under the B.S. in electronics engineering, allows students to develop a broad-based knowledge of electrical/electronic fundamentals with an applications perspective. The Technology Accreditation Commission of ABET accredits this program.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The electronic systems concentration prepares persons for careers in control, electronics, instrumentation and power systems applications. Engineering technologists typically work as members of engineering teams in applied design, product development, manufacturing, production or operations. They may also be employed in technical services capacities, including field engineering, marketing or sales.

*Contact:*

Department of Engineering Technology  
<http://technology.asu.edu/engrtech>  
engrtech@asu.edu  
TECH 101  
480/727-1584

**Electronics Engineering Technology (Integrated Systems) (BS) TSEETINBS**

College of Technology and Innovation

*Program Description:* The integrated electronic systems concentration, under the B.S. in electronics engineering technology, covers the processes and technology used to develop, design, manufacture and exploit integrated electronic functions on silicon, in packages and on boards. The program provides hands-on laboratory experience in integrated circuit device fabrication and manufacturing in a setting that emulates the real industry.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Upon completion of this concentration, graduates are prepared for careers in microelectronics industry. Graduates of this concentration

secure positions in integrated circuit processing, testing, field applications, system integrators and as members of diverse scientific engineering teams.

*Contact:*

Department of Engineering Technology  
<http://technology.asu.edu/engrtech>  
engrtech@asu.edu  
TECH 101  
480/727-1584

**Electronics Engineering Technology (Telecommunications) (BS) TSEETTBS**

College of Technology and Innovation

Not accepting applications.

*Program Description:* The telecommunications concentration, under the B.S. in electronics engineering technology, covers the processes and technology used to develop, design, implement and exploit reliable information transfer throughout the whole frequency spectrum with wired and wireless links. Applications include cable TV, fiber optic links and satellite transmission circuits and systems.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Upon completion of this concentration, graduates are prepared for careers in communications industry. Graduates of this concentration secure positions as communications specialists, system integrator, testing, field applications and as members of diverse scientific engineering teams.

*Contact:*

Department of Engineering Technology  
<http://technology.asu.edu/engrtech>  
engrtech@asu.edu  
TECH 101  
480/727-1584

**Engineering (BSE) TSEGRBSE**

College of Technology and Innovation

*Program Description:* The emerging problems that engineers must solve require a broad set of interdisciplinary skills. Engineers are challenged with improving the quality of life for humankind, designing new innovative products, preparing for potential catastrophes, and providing society with technological leadership.

The B.S.E. is a unique program designed to produce creative engineers who can meet these challenges. The structure of this degree program is flexible and responsive to emerging engineering fields. The program integrates a broad knowledge base with study in multiple concentrations, providing both breadth and depth. This provides a greater flexibility in curricular and career pathways allowing

for multidisciplinary experiences and novel combinations of expertise. It approaches this task by a heavy reliance on projects in which student teams design and build devices that solve realistic problems.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Engineers normally work as a member of a team that is designing, manufacturing and delivering technological objects and services. These teams are often multidisciplinary and employers often seek specific technical skills as opposed to a specific type of engineering degree. While large corporations and governments employ many engineers, others work in small companies or start companies of their own.

*Contact:*

Department of Engineering  
<http://technology.asu.edu/engineering/>  
egr@asu.edu  
Santan 230  
480/727-2727

### **Environmental Technology Management (BS) TSETMBS**

College of Technology and Innovation

*Program Description:* This degree program is designed to provide graduates with the critical scientific, technical and management skills needed to solve the environmental challenges faced by industry and by society in today's highly regulated and competitive business climate. The B.S. in environmental technology management curriculum includes courses in biology, chemistry, physics, calculus, computer science and statistics. The core of course work includes courses in:

- Emergency management.
- Environmental chemistry.
- Environmental law.
- International environmental management.
- Occupational hygiene.
- Technologies for control of air pollution, water treatment and hazardous waste remediation.

In addition to the technical course, students take management courses such as technical communications, project management and management dynamics.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates are prepared to be environmental managers in an industrial setting, to work in an environmental regulatory agency or to work for an environmental engineering firm. Industry and government entities value environmental technology management graduates because they have a practical and solid understanding of not only the scientific and technical aspects of controlling

environmental pollution, but also the economic, political and legal problems facing managers in today's business climate.

*Contact:*

Department of Technology Management  
<http://technology.asu.edu/dtm>  
ts@asu.edu  
TECH 102  
480/727-1781

**Graphic Information Technology (BS) TSGITBS**

College of Technology and Innovation

*Program Description:* The cross-media nature of the graphic information industry requires today's graduates to understand the full spectrum of graphic imaging and reproduction processes, and current business practices. The B.S. in graphic information technology degree program prepares graduates for a seamless career in the graphics industry from traditional printing and publishing to the Internet and multimedia. This is an intensive program of study emphasizing theory and hands-on laboratory practice. Students develop skills to plan and execute graphic solutions using visualization and prepress, engineering graphic standards, technical document design, higher-level graphic programming languages, computer drawing and illustration, commercial digital photography, multimedia and 3-D modeling, project management, quality assurance and e-commerce practices. The National Association of Industrial Technology professionally accredits the graphic information technology program.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The graphic information technology concentration prepares graduates for technical and management positions in the diverse graphic communication and information technology industries, such as:

- Digital printing and publishing.
- Management of graphic information assets.
- Planning and evaluation of print, Internet, multimedia and computer-based communications.
- Quality assurance of graphic products.
- Technical/digital media production.

*Contact:*

Department of Technology Management  
<http://technology.asu.edu/dtm>  
ts@asu.edu  
TECH 102  
480/727-1781

## **Manufacturing Engineering Technology (Manufacturing Engineering Technology) (BS) TSMETBS**

College of Technology and Innovation

*Program Description:* The manufacturing engineering technology program emphasizes applied engineering practice through a B.S. program. In the program, engineering, math and science principles are applied to the solution of technical problems in a lecture/laboratory environment. The program's educational approach focuses on producing a work-ready graduate by incorporating knowledge practicing manufacturing engineers use in their work in industry. This is accomplished by students "learning by doing" via the use of equipment typical of that found in industry. The program's manufacturing laboratories are among the best in the nation. Industrial-strength manufacturing equipment, including computer numerical control (CNC) machining centers, welding, casting and forming, automation and material testing facilities support the curriculum. Laboratory sections are restricted to 12-15 or fewer students when possible. All faculty in the program have industry experience in addition to doctoral degrees.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The B.S. in manufacturing engineering technology and its specialty concentration offer great flexibility in both type of work and location. Career employment opportunities include design and development, direct manufacturing support, quality control and assurance, sales and management. Companies large and small, in this region and outside, provide a wide range of opportunities for graduates.

### *Contact:*

Department of Engineering Technology  
<http://technology.asu.edu/engrtech>  
engrtech@asu.edu  
SIM 295  
480/727-1584

## **Manufacturing Engineering Technology (Mechanical Engineering Technology) (BS) TSMETMBS**

College of Technology and Innovation

*Program Description:* The manufacturing engineering technology program emphasizes applied engineering practice through a B.S. program. In the program, engineering, math and science principles are applied to the solution of technical problems in a lecture/laboratory environment. The program's educational approach focuses on producing a work-ready graduate by incorporating knowledge practicing manufacturing engineers use in their work in industry. This is accomplished by students "learning by doing" via the use of equipment typical of that found in industry. The program's manufacturing laboratories are among the best in the nation.

Students can customize manufacturing engineering technology degree with a specialized mechanical concentration. The primary objective of the mechanical engineering technology concentration is to offer manufacturing students an emphasis in mechanics and design.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Graduates often achieve employment as manufacturing engineers. The mechanical concentration enables students to also work in the design field where interfacing with manufacturing operations is an important part of the job.

*Contact:*

Department of Engineering Technology  
<http://technology.asu.edu/engrtech>  
engrtech@asu.edu  
SIM 295  
480/727-1584

### **Mechanical Engineering Technology (Aeronautical Engineering Technology) (BS) TSMECEBS**

College of Technology and Innovation

*Program Description:* The mechanical engineering technology program emphasizes applied engineering practice through a B.S. program. Students can customize their degree with a specialized concentration in aeronautical engineering technology. The aeronautical engineering technology concentration provides a specialty content area in aircraft airframe, propulsion and aircraft production and operations. It prepares students for employment in areas such as aircraft design and manufacturing, aerodynamics, propulsion and wind tunnel testing. However, aeronautical concentration graduates have a good general background in mechanical engineering technology and are not limited to employment opportunities in just the aviation industry.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The B.S. in mechanical engineering technology and its specialty concentrations offer great flexibility in both type of work and location. Employment opportunities exist in companies that design, develop, manufacture, implement and improve products, machinery and systems. Employment areas include engineering design, manufacturing, research and development. Companies large and small, in this region and elsewhere, provide a wide range of opportunities for graduates. The aeronautical concentration prepares students for employment in areas such as aircraft design and manufacturing, aerodynamics, propulsion and wind tunnel testing.

*Contact:*

Department of Engineering Technology  
<http://technology.asu.edu/engrtech>  
engrtech@asu.edu  
SIM 295  
480/727-1584

**Mechanical Engineering Technology (Automation Engineering Technology) (BS)**  
**TSMECUBS**

College of Technology and Innovation

*Program Description:* The mechanical engineering technology program emphasizes applied engineering practice through a B.S. program. Students can customize their degree with a specialized concentration in automation engineering technology. The automation engineering technology concentration provides specialty content in mechanical automation. Automated assembly and testing are major components of most modern, high-volume mechanical systems and manufacturing operations. As a specialty area, this concentration provides students with an opportunity to develop knowledge and skill in the broad area of automation. It also dovetails well with the semiconductor industry where most process tools are highly automated.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The B.S. in mechanical engineering technology and its specialty concentrations offer great flexibility in both type of work and location. Employment opportunities exist in companies that design, develop, manufacture, implement and improve products, machinery and systems. Employment areas include engineering design, manufacturing, research and development. Companies large and small, in this region and elsewhere, provide a wide range of opportunities for graduates. Automation concentration graduates have special knowledge focused on designing and implementing automated manufacturing and assembly equipment. This includes industrial robots. Thus graduates can work in the wide variety of companies that design, build or utilize high speed automated machinery. This includes the semiconductor, automotive or electronics industries.

*Contact:*

Department of Engineering Technology  
<http://technology.asu.edu/engrtech>  
engrtech@asu.edu  
SIM 295  
480/727-1584

**Mechanical Engineering Technology (Automotive Engineering Technology) (BS)**  
**TSMECTBS**

College of Technology and Innovation

*Program Description:* The mechanical engineering technology program emphasizes applied engineering practice through a B.S. program. Students can customize their degree a specialized concentration in automotive engineering technology. The automotive concentration provides comprehensive exposure to modern automobiles. The concentration's course configuration is based on the functional structure of an automotive company and emphasizes system integration. Courses include an introduction to automotive engineering including interior and exterior body design, powertrains, chassis design, electrical and control systems, thermal design and system integration and testing.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* The B.S. in mechanical engineering technology and its specialty concentrations offer great flexibility in both type of work and location. Employment opportunities exist in companies that design, develop, manufacture, implement and improve products, machinery and systems. Employment areas include engineering design, manufacturing, research and development. Companies large and small, in this region and elsewhere, provide a wide range of opportunities for graduates. The automotive concentration provides students the additional option of being prepared to work for automotive companies, small or large, or their suppliers. Students have a broad background in vehicle engineering and can quickly contribute in a variety of positions within a company.

*Contact:*

Department of Engineering Technology  
<http://technology.asu.edu/engrtech>  
engrtech@asu.edu  
SIM 295  
480/727-1584

### **Mechanical Engineering Technology (Mechanical Engineering Technology) (BS) TSMECBS**

College of Technology and Innovation

*Program Description:* The mechanical engineering technology program emphasizes applied engineering practice through a B.S. program. Students in this program are people who enjoy the practice of engineering. As graduates, they often work as members of design and development teams, cooperating with other people both in and outside of their company. The program emphasizes understanding how engineering principles are applied in practice. Graduates have an understanding of:

- Energy and power technology including alternative energy systems.
- The behavior of fluids.
- The design of machines and components.
- The selection of machine components and engineering measurements.

The mechanical engineering technology program has a practice-based approach and uses both laboratories and industry projects to make mechanical engineering “real” to students. Engineering, math and science principles are applied to the solution of technical problems in a lecture/laboratory environment.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* The B.S. in mechanical engineering technology and its specialty concentrations offer great flexibility in both type of work and location. Employment opportunities exist in companies that design, develop, manufacture, implement and improve products, machinery and systems. Employment areas include engineering design, manufacturing, research and development. Companies large and small, in this region and elsewhere, provide a wide range of opportunities for graduates.

*Contact:*

Department of Engineering Technology  
<http://technology.asu.edu/engrtech>  
engrtech@asu.edu  
SIM 295  
480/727-1524

### **Operations Management Technology (BS) TSOMTBS**

College of Technology and Innovation

*Program Description:* The B.S. in operations management technology degree program prepares students for supervisory and administrative positions within a broad range of industries. Course work includes:

- Economics.
- Effective decision making.
- Ethical studies.
- Finance.
- Human resource management.
- Industrial organization.
- International management.
- Labor relations.
- Lean manufacturing.
- Legal issues in technology.
- Marketing.
- Operations management.
- Project management.
- Quality management.
- Safety management.

Students who lack previous work experience are encouraged to complete an industry internship before graduation.

*Language Requirement: N | Program Fee: N*

*Career Opportunities:* Career opportunities for graduates with a degree in operations management technology include, but are not limited to, positions in technical operations, technical sales, municipal management, industrial management, quality control, industrial planning, design, customer relations, personnel training and development. Degree outcomes advance careers in business and industry to include the manufacturing, healthcare and service sectors.

*Contact:*

Department of Technology Management

<http://technology.asu.edu/dtm>

ts@asu.edu

TECH 102

480/727-1781

## Undergraduate Programs

### Undergraduate Exploratory Programs (Program Descriptions)

#### University College

##### Exploratory Health & Life Sciences UCHSCIEXPL

University College

*Program Description:* The exploratory health and life sciences track affords students an opportunity to explore a variety of majors related to the health and life science professions. For a complete list of all majors included in this exploratory major, reference the Major Map.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* This is not a degree granting major. Transfer students with more than 45 transfer hours will not be admitted to this program and should select a different major on the application for admission.

*Career Opportunities:* Career opportunities are specific to the ultimate major of choice.

*Contact:*

University College  
<http://uc.asu.edu/>  
[exploratory@asu.edu](mailto:exploratory@asu.edu)  
4809654464

##### Exploratory Humanities, Fine Arts & Design UCHUFAEXPL

University College

*Program Description:* The exploratory humanities, fine arts and design track affords students an opportunity to explore a variety of majors related to the humanities, fine arts and design professions. For a complete list of all majors included in this exploratory major, reference the Major Map.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* This is not a degree granting major. Transfer students with more than 45 transfer hours will not be admitted to this program and should select a different major on the application for admission.

*Career Opportunities:* Career opportunities are specific to the ultimate major of choice.

*Contact:*

University College  
<http://uc.asu.edu/>  
[exploratory@asu.edu](mailto:exploratory@asu.edu)  
480/965-4464

**Exploratory Math, Physical Sciences, Engineering & Technology UCMTPEXPL**

University College

*Program Description:* The exploratory mathematics, physical sciences, engineering and technology track affords students an opportunity to explore a variety of majors related to the mathematics, physical sciences, engineering and technology professions. For a complete list of all majors included in this exploratory major, reference the Major Map.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* This is not a degree granting major. Transfer students with more than 45 transfer hours will not be admitted to this program and should select a different major on the application for admission.

*Career Opportunities:* Career opportunities are specific to the ultimate major of choice.

*Contact:*

University College  
<http://uc.asu.edu/>  
[exploratory@asu.edu](mailto:exploratory@asu.edu)  
480/965-4464

**Exploratory Social & Behavioral Sciences UCSBSEXPL**

University College

*Program Description:* The exploratory social and behavioral sciences track affords students an opportunity to explore a variety of majors related to the social and behavioral sciences and business-related careers. For a complete list of all majors included in this exploratory major, reference the Major Map.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* This is not a degree granting major. Transfer students with more than 45 transfer hours will not be admitted to this program and should select a different major on the application for admission.

*Career Opportunities:* Career opportunities are specific to the ultimate major of choice.

*Contact:*

University College

<http://uc.asu.edu/>  
exploratory@asu.edu  
480/965-4464

## Undergraduate Programs

### Undergraduate Programs - Other (Program Descriptions)

#### Art Exploratory FAARTPREBA

Program information not available at time of publication.

*Contact Information:*

Herberger Institute of Design and the Arts  
<http://herbergercollege.asu.edu/>

#### Business – Bachelor of Arts (BA) BABUSBA

W. P. Carey School of Business

Not accepting applications.

*Program Description:* Coming soon! ASU will soon start accepting applications to the new BA in Business in the W.P. Carey School of Business.

The Bachelor of Arts (BA) in Business is an innovative, interdisciplinary program providing attractive concentrations that are valuable in a business context. Students in the Bachelor of Arts in Business program will take a set of lower-division "skill" courses (Accounting, Computer Information Systems, Economics, Mathematics, and Statistics), the business core (Finance, Legal and Ethical Studies, Management, Marketing, and Supply Chain Management), plus courses in a specific major outside of the business school that we believe will be valuable in a business context.

In consultation with our university partners, we have identified four concentration areas, Communication, Sustainability, Tourism, and Urban Policy, that will produce graduates to meet market demands. Students must select a concentration by the end of their second semester. More may be added as the program evolves.

Freshman and transfer students must submit either a SAT Reasoning test scores or an ACT test score (we do not require the writing portion of these tests) by the end of the first semester in the program. There is no minimum score requirement.

*Language Requirement:* N | *Program Fee:* N

*Admission Requirements:* Transfer Students: This major has admission requirements in addition to those of the university. 3.0 GPA for all transfer work.

Freshmen Students: Freshman admission requirements for this program are the same as the University's freshman admission requirements.

*Career Opportunities:* The Bachelor of Arts in Business is intended to prepare students for positions in a variety of professions where business plays an important role in ensuring success. The program will produce graduates with the capability and motivation for continued learning throughout their careers.

*Contact:*

Dean, W.P. Carey School of Business  
<http://wpcarey.asu.edu/>

### **Dance Interview FADANPRE**

Program information not available at time of publication.

*Contact Information:*

Herberger Institute of Design and the Arts  
<http://herbergercollege.asu.edu/>

### **Music Audition FAMUSPRE**

Program information not available at time of publication.

*Contact Information:*

Herberger Institute of Design and the Arts  
<http://herbergercollege.asu.edu/>

### **Pre-Health/Pre-Med Professions LAMEDPRE**

College of Liberal Arts and Sciences

*Program Description:* Students who are interested in pursuing a medical, dental or other health career can major in any area they wish, as long as they fulfill the particular professional school's prerequisite requirements. Successful applicants have majored in such diverse fields as:

Art  
Biology  
Chemistry  
Economics  
Engineering  
Music  
Psychology

The College of Liberal Arts and Sciences health career services office provides ongoing academic career advising for pre-health students who wish to pursue a career in:

Chemistry

Medicine  
Optometry  
Pharmacy  
Physical therapy  
Podiatry

*Language Requirement:* N | *Program Fee:* Y

*Admission Requirements:* Students must meet the admission requirements of the major to which they apply.

*Career Opportunities:* The health career services office is devoted to helping students make important decisions about their futures and assisting them with the technical aspects of the application process for professional health programs. The very competitive nature of admission to these programs makes it essential for students to work closely with the office from the beginning of their studies at ASU.

*Contact:*

<http://prehealth.asu.edu/>  
prehealth@asu.edu  
FULTN 110  
480/965-2365

### **Pre-Law LALAWPRE**

College of Liberal Arts and Sciences

*Program Description:* This program is designed for students interested in pursuing a legal career. Law school admission policies do not favor one major over another, provided the pre-law student's chosen major requires substantive course work. Instead of recommending a single program, the Association of American Law Schools suggests that an undergraduate education develop certain skills, qualities, knowledge and insights essential to the law student and ultimately to the profession. At the point that the student is ready to take the LSAT and begin the application process, he or she is encouraged to meet with a pre-law professional either in the student's major or in the Office of Student and Academic Programs.

*Language Requirement:* N | *Program Fee:* N

*Career Opportunities:* Pre-law advisors can help students make important decisions about their futures and assist them with the technical aspects of the application process for law school programs.

*Contact:*

<http://prelaw.asu.edu/>  
clasundergrad@asu.edu

FULTN 110  
480/965-6506