

Minors, Certificates, and Interdisciplinary Studies

Interdisciplinary studies are available to students through an interdisciplinary degree, the Bachelor of Interdisciplinary Studies, or an extensive choice of minors or certificates that may be taken in conjunction with other majors. Since interdisciplinary studies provide skills that support employment in a rapidly changing work place, students are encouraged to consider these options. Consult the academic advisor in your major about the impact of enrolling in a minor or certificate program.

Minors

A minor is an approved, coherent concentration of academic study in a single discipline, involving substantially fewer hours of credit than the corresponding major. Several ASU colleges offer undergraduate minors in addition to majors; see the “Minors” table. For more information about specific minors offered at ASU, refer to the individual college and department descriptions in this catalog.

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/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.

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 would not be 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.

Minors	
Minor	Page
College of Architecture and Environmental Design	
Environmental Resources	138
Interior Design History	134
Urban Planning	138
College of Business	
Business (for nonbusiness majors)	150
Small Business	173
College of Fine Arts	
Art History	265
Dance	277
Music	286
Theatre	296

Minors (continued)

Minor	Page
College of Liberal Arts and Sciences	
African American Studies	336
Anthropology	338
Asian Languages (Chinese/Japanese)	383
Astronomy	408
Biology	343
Chemistry and Biochemistry	348
Chicana and Chicano Studies	352
Economics for Students Planning a Career in Law	353
English with a Concentration in Linguistics	354
English with a Concentration in Literature	355
Exercise Science/Physical Education	360
Family Resources and Human Development	364
French	383
General Economics	353
Geography	369
Geology	372
German	383
History	374
Humanities	379
Italian	383
Mathematics	395
Microbiology	401
Philosophy	405
Physics	408
Plant Biology	414
Political Science	417
Psychology	421
Religious Studies	424
Russian	383
Sociology	427
Spanish	383
Women’s Studies	432
College of Public Programs	
Communication	449
Justice Studies	458
Mass Communication	455
Recreation Management*	463
Tourism	463
Interdisciplinary Programs	
Gerontology	111

* Applications are not being accepted at this time.

Certificates

Students may pursue some certificate programs along with a major and other certificate programs independently. For more information, refer to the pages indicated in the “Certificates” table, page 111, and “ASU West Certificates,” page 4.

Certificates

Certificate	Page
African American Studies	337
American Humanics, Certificate in Youth Agency Administration	463
American Indian Justice Studies	458
Asian Studies	331
Computer Technology ¹	255
East Asian Studies	331
Gerontology	111
Hazardous Materials and Waste Management	24
Health Physics	331
Human Performance Improvement ¹	255
Indian Law	447
International Business Studies	154
Jewish Studies	331
Latin American Studies	332
Medieval and Renaissance Studies	332
Medieval Studies ^{1,2}	
Museum Studies ^{1,2,3}	
Nonprofit Management ¹	255
Post-Master's Family Nurse Practitioner ¹	255
Quality Analysis	154
Renaissance Studies ^{1,2}	
Russian and East European Studies	332
Scholarly Publishing ^{1,2}	
Scandinavian Studies	332
Small Business and Entrepreneurship	154
Southeast Asian Studies	332
Translation	384
Transportation Systems ^{1,2}	
Women's Studies	432
Writing	355

¹ This certificate program is not available as a B.I.S. concentration.

² For more information, see the *Graduate Catalog*.

³ For more information, contact the Department of Anthropology.

Concurrent and Dual Degrees

Graduate students have the opportunity to pursue more than one degree at the same time as part of an organized program. For more information, see the *Graduate Catalog*.

Interdisciplinary Studies

Asian Studies. See "Asian Studies," page 331, for information about the Certificate in Asian Studies.

Bachelor of Interdisciplinary Studies. See "Bachelor of Interdisciplinary Studies," page 114, for information about this major.

Energy Studies. An expanding instructional and research involvement in energy matters exists through the following three curricular paths:

1. general studies, which emphasize energy as an elective beyond the scope of a chosen major (for more information, contact M.J. Pasqualetti, 480/965-4548);
2. specific studies in the College of Architecture and Environmental Design, for those pursuing the Master of

Architecture degree and the Master of Science degree in Building Design; and

3. specific studies in the College of Engineering and Applied Sciences, usually for those seeking a degree in a branch of engineering.

Environmental Studies. The Center for Environmental Studies encourages and coordinates interdisciplinary environment-related activities in the natural and social sciences within the university. The center sponsors special courses, conferences, and workshops on environmental topics. Drawing from faculty and students throughout the university, the center participates in research and community programs relating to environmental problem areas. It does not formally offer courses or a degree program. For more information, see "Center for Environmental Studies," page 39, or call 480/965-2975.

Film Studies. The Film Studies Program exists not only to provide information and experience but also to serve as a means of creative expression for the student and as a useful subject and tool in teaching. The program is not designed to produce professional filmmakers, but it may provide practical preparation for students desiring further film study in other institutions.

Inquiries about this program should be directed to the Film Studies coordinator, Jay Boyer, at 480/965-7644.

Gerontology. The Gerontology Program brings together faculty from several disciplines to teach courses related to adult development and aging, to collaborate on gerontological research, and to participate in projects of service to older adults.

A certificate at the postbaccalaureate level and an undergraduate minor are available in Gerontology. The certificate consists of 24 semester hours—12 hours of required and 12 hours of elective course work. The minor consists of 18 semester hours—six hours of required and 12 hours of elective course work. Courses related to aging are taught throughout the university by faculty who are active contributors to research, theory, and public policy and practice. In addition, gerontology provides students with opportunities to gain practical experience in working with elderly people. A practicum, held at the Veterans Administration Hospital, is available to students who have completed some gerontology course work. Gerontology also helps students find rewarding internships in community programs for older adults. For more information, see "Gerontology Certificate Program," page 255, and "Gerontology," page 303, refer to the current *Student Handbook in Gerontology*, or call 480/965-3225.

Islamic Studies. The art, history, geography, and religion of the Islamic world are the subjects of several courses offered by departments in the College of Fine Arts and the College of Liberal Arts and Sciences. For information, call Dr. Mark Woodward, Department of Religious Studies, at 480/965-7145.

Linguistics. Linguistics concentrations are offered in master's degree programs in the Departments of Anthropology, English, and Languages and Literatures through the Graduate College. Numerous linguistics courses are offered in these and other departments. For information, call Dr. Dawn

Bates of the University Committee on Linguistics, at 480/965-3168.

Medieval and Renaissance Studies. An undergraduate Certificate in Medieval and Renaissance Studies is offered by the Arizona Center for Medieval and Renaissance Studies. See “Medieval and Renaissance Studies,” page 332, for more information. See the *Graduate Catalog* for information about the Certificate in Medieval Studies and the Certificate in Renaissance Studies. See the “Arizona Center for Medieval and Renaissance Studies,” page 36, for information about the center.

Southeast Asian Studies. See “Southeast Asian Studies,” page 332, for information about the Certificate in Southeast Asian Studies.

Transportation Systems. See the *Graduate Catalog* for information on the Certificate in Transportation Systems.

Women’s Studies. See “Women’s Studies,” page 333, for information about the Certificate in Women’s Studies.

MILITARY OFFICER TRAINING

U.S. Air Force and U.S. Army ROTC units are active on the ASU campus. See “Department of Aerospace Studies” and “Department of Military Science,” pages 333 and 402, for more information.

Defense Activity for Non-Traditional Education Support (DANTES). ASU is a participating institution with DANTES and is listed in the DANTES Directory of Independent Study. DANTES is an executive agency of the Department of Defense that provides educational support for the voluntary education programs of all services. The primary missions of DANTES are (1) to provide nationally recognized examination and certification programs as part of the voluntary education programs of military services and (2) to facilitate the availability of high-quality independent institutions for service men and women.

WESTERN INTERSTATE COMMISSION FOR HIGHER EDUCATION (WICHE)

For Arizona residents who wish to attend professional schools of dentistry, veterinary medicine, occupational therapy, optometry, and osteopathy in one of the other western states, Arizona has joined with the other western states to create the Western Interstate Commission for Higher Education. Through WICHE, qualified Arizona residents may attend schools in other western states at essentially the same expense to the students as to residents of the state in which the school is located. Students must have maintained at least average grades in their preprofessional work and must have been legal residents of Arizona for at least the last five years. Recipients are required to return to Arizona to practice or to repay a portion of the funds expended in their behalf.

For applications and more information, call 480/965-2365.



Students conducting air quality research

Tim Trumble photo

Division of Undergraduate Academic Services

The Division of Undergraduate Academic Services is a primary source of academic support for students, faculty, and staff. The division coordinates and offers academic programs and services designed to enhance the academic experience of ASU undergraduate students. The goals of the division are to play a major role in student retention, provide students the support necessary for successful completion of their first year and beyond, and offer students learning experiences that complement those provided by other academic units.

The division includes Education Support Services, Bachelor of Interdisciplinary Studies, Advising Services, and General Studies.

EDUCATION SUPPORT SERVICES

This unit provides university-wide teaching and learning support to students and faculty in defined academic areas.

For more information, call 480/965-3097.

Campus Match

Campus Match is a first-semester fall program that gives freshmen the opportunity to attend classes in small learning communities according to their academic interest. Students choose a “cluster” of classes from a wide variety of cluster offerings. Each cluster is limited to 25 students who enroll in and attend classes together. All students attend a weekly one-hour peer-led seminar that facilitates their social as well as academic adjustment to the university.

University Success Courses

The purpose of the UNI courses is to assist first-year, transfer, and re-entry students in making a successful transition to the university. Students learn university resources, policies and procedures, study skills, values and goal setting, human diversity, academic and career planning, and other skills.

UNIVERSITY (UNI)

UNI 100 Academic Success at the University. (3) F, S, SS
Orientation to campus resources, study skills, and other academic and social issues for college students. Introduction to an understanding of human diversity, values, and perspectives as they relate to student success. Lecture, seminar, discussion. Prerequisite: freshman or sophomore or transfer student standing.

UNI 101 Student Success Seminar. (1) F, S, SS
Understanding human diversity, perspectives, and values as they relate to student success. Orientation to ASU resources, study skills, and academic and social issues for students. Seminar, discussion.

Supplemental Instruction

Supplemental Instruction (SI) works to improve student performance and increase retention in historically difficult courses (those with high rates of D, E, and W grades). An SI leader attends class and offers voluntary study sessions to all students enrolled in the class. During the study sessions, students work together to learn course content and to enhance study skills.

Summer Bridge

Summer Bridge is a program designed to assist first-semester freshmen in making the transition from high school to university life. Summer Bridge is a five-week, residential program that provides a full academic curriculum in conjunction with a rich residence hall experience. The program assists participants in acclimating to campus, accessing student support programs and services, and enhancing classroom skills.

Service Learning Project

The Service Learning Project uses community service to enhance education. The project is based on the concept of reciprocal learning. Service Learning sections of regular courses are linked to credit-bearing internships where students apply what they are learning in the community to their course work.

For example, English composition students contribute one-on-one homework tutoring, reading development, educational enrichment workshops, and learning readiness programs for children and youth for six hours per week during a semester. In turn, their community experiences and research form the basis of the tutors’ classroom research and papers. ASU students are required to prepare personalized lesson plans for every tutoring session.

Students in a Service Learning Plant Biology course for nonmajors are teaching Julian Middle School and Salt River Elementary School fifth-grade students simplified versions of the science concepts they are learning themselves.

Students in a 100-level Physical Geography course partner with sixth-grade students at the Salt River Elementary School to share their knowledge of the physical environment.

All one-on-one tutoring is done in an after-school environment at partner agencies and schools, while the sciences have been written into the core curriculum of four of the partner schools.

Students may enroll in the internships with previous or current enrollment in one of the following linked courses:

Linked Courses

Composition and Linguistics Courses

ENG 102 First-Year Composition3
ENG 217 Writing Reflective Essays *L13*
ENG 301 Writing for the Professions *L13*
ENG 312 English in Its Social Setting *HU/SB3*

See ENG course listings for more details.

Sciences and Additional Courses

GLG 101 Introduction to Geology I *S1/S2, G3*
GLG 103 Introduction to Geology I Laboratory *S1/S21*
GPH 111 Introduction to Physical Geography *S1/S24*
MTE 180 Theory of Elementary Mathematics3
PHS 208 Patterns in Nature *S1/S24*
PLB 108 Concepts in Plant Biology *S1/S24*

See appropriate course listings for more details.

INTERNSHIPS

ENG 484 Composition Internship. (3) F, S

Links courses with internships which involve tutoring children in after-school programs in the community and assisting them with reading, homework, and computer skills. Three afternoons a week from 3:00 p.m. to 5:00 p.m., Monday through Thursday.

GLG 484 Geology Internship. (3) F, S

Assist in teaching fifth-grade students a simplified version of GLG 103 using hands-on activities.

GPH 484 Geography Internship. (3) F, S

Assist in teaching sixth-grade students a simplified version of GPH 111 using hands-on activities.

MTE 484 Theory of Elementary Mathematics Internship.

(3) F, S

Employ hands-on activities and manipulatives to advance mathematical understanding in second- to fourth-grade students.

NUR 484 Nursing Internship. (3) F, S

Plan and conduct health issues workshops for secondary school students at Desert Eagle School.

PHS 484 Patterns in Nature Internship. (3) F, S

Teach middle school students scientific concepts discussed and demonstrated in PHS 208. Hands-on experience is the focus of the teaching.

PLB 498 PS: Science Internship. (3) F, S

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

UNI 494 ST: Science is Magic Internship. (3) F, S

Present science demonstrations to K–8 children at their schools. Interns will be trained by personnel from the Center of Solid-State Science. This internship does not follow the format of the others.

Writing Across the Curriculum (WAC)

Curriculum Development and Support. WAC Curriculum Development and Support is designed to assist in enhancing the quality of writing and critical thinking skills of university students.

WAC specialists consult with faculty on methods of developing and integrating writing assignments into course content. They also provide customized in-class writing workshops designed to assist students in researching and responding to writing assignments.

Writing Center. The Writing Center is a service that provides students with one-on-one and group tutoring in writing skills. Rather than proofreading or editing students' writing, the Writing Center teaches students the skills they need to improve their writing process and product.

BACHELOR OF INTERDISCIPLINARY STUDIES

The Bachelor of Interdisciplinary Studies (B.I.S.) is a university-wide program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations and an interdisciplinary core, students in the B.I.S. are expected to take an active role in creating their educational plan and defining their vocational goals. The B.I.S. emphasizes written communication, versatility, and critical thinking, skills desired in a changing workplace environment. Self-assessment and appraisal of opportunities to support academic and career goals are key elements in the core courses. The concentrations are based on approved academic minors and certificate programs and should represent academic interests that the student wishes to integrate into a meaningful program.

Students, other than entering freshmen, must contact Cross-college Advising Services (CAS) in UASB 131, 480/965-4464, to attend an informational session conducted by an academic advisor before declaring the B.I.S. major.

The combination of areas of concentration gives students greater flexibility in creating a unique program to accomplish individualized academic goals. Combinations created by current students illustrate a range of examples:

1. American Humanics Certificate Program and Theatre
2. Business and Communication
3. Business and Environmental Resources
4. Communication and Sociology
5. Dance and Exercise Science
6. Economics and Spanish
7. Environmental Resources and Geology
8. Justice Studies and Political Science
9. Psychology and Women's Studies
10. Religious Studies and Anthropology

Basic Requirements

The B.I.S. requires 120 semester hours. The major is composed of a 12-hour core and a minimum of 36 semester hours in two concentrations (18 hours each). Throughout the core sequence, the student assembles a portfolio including self-assessment of progress toward career goals and an evaluation of key educational and personal activities that may apply.

Core Courses

BIS	301	Foundations of Interdisciplinary Studies	L13
BIS	302	Interdisciplinary Studies	3
BIS	401	Applied Interdisciplinary Studies	3
BIS	402	Senior Seminar	L23

Total 12

Other Requirements

In addition to the basic requirements, students must complete all university requirements, including English Composition and General Studies. Early advising is recommended to facilitate selecting courses that may apply to both the General Studies requirements and the areas of concentration.

Declaring the B.I.S. Major. Academic advising from Cross-college Advising Services is required before being approved to declare the B.I.S. In addition, the following requirements must be completed by the end of the semester of the request:

1. 45 semester hours of college credit;
2. cumulative G.P.A. of 2.00; and
3. selection of two concentrations, with a minimum of two courses in each (minimum grade of "C") completed or, one completed and one in progress in each area.

All incoming students and continuing students with a minimum GPA of 2.00 who do not meet the above requirements are placed in a pre-B.I.S. major until the requirements have been met.

Approved Concentrations

Each concentration requires 18 semester hours, of which 12 hours must be at the upper division. They are based on existing minors or certificate programs (see colleges for spe-

cific minors or certificate programs). Concentrations based on minors with fewer than 18 hours have additional semester hours required. Complete information on each concentration is available in CAS, UASB 131.

See the “Minors” table page 110, and “Certificates” table, page 111, and the sections of the specific colleges involved.

BACHELOR OF INTERDISCIPLINARY STUDIES (BIS)

BIS 301 Foundations of Interdisciplinary Studies. (3) F, S, SS

Introduces concepts and methods of interdisciplinary study by critically examining anticipated 21st-century workplace and civic trends. Lecture, seminar, discussion. Prerequisite: B.I.S. major; 18 hours completed; 2.00 GPS. *General Studies: L1.*

BIS 302 Interdisciplinary Studies II. (3) F, S, SS

Demonstrates interdisciplinary principles as applied to progressively more complex problems. Students choose among course topics that address both their concentrations. Lecture, seminar, discussion. Prerequisite: BIS 301.

BIS 401 Applied Interdisciplinary Studies. (3) F, S, SS

Applies interdisciplinary problem-solving skills in internships, service-learning, or research; may involve individual or group projects combining both concentrations. Prerequisite: BIS 301.

BIS 402 Senior Seminar. (3) F, S, SS

Capstone course will help students integrate their classroom and experiential learning. Lecture, seminar, discussion. Prerequisites: BIS 301, 302, 401. *General Studies: L2.*

ADVISING SERVICES

Cross-College Advising Services

Cross-college Advising Services ([CAS] UASB 129, 480/965-4464), is a central advising, referral, and information

Students demonstrating university pride during ASU Homecoming parade

facility whose staff is available to assist students in their academic careers at ASU. Emphasis is placed on advising services to first-time, prospective, transfer, and visiting students and students in transition, such as those changing majors and those without majors. In addition to guidance in the exploration or selection of a major, CAS provides general academic information and referrals to all areas of student academic support.

Degree Audit Reporting System (DARS)

DARS is an online tool that provides students with consistent, accurate information regarding their academic requirements. Through this system, a degree audit is produced that matches a student’s completed courses against degree program requirements in a matter of seconds. The audit allows students to assess their progress toward their degree or to determine how their earned credits would apply if they were to pursue another degree program. Audits may be obtained from the student’s academic advisor.

GENERAL STUDIES

All students enrolled in a baccalaureate degree program must satisfy General Studies requirements. For more information, see “University Graduation Requirements,” page 81, and “General Studies,” page 85.

