
Colleges

Colleges and schools at ASU Main and ASU East offer graduate degrees and certificates under the oversight of the Graduate College. ASU West graduate programs are offered separately.

For information about specific degree and certificate programs, see “Graduate Programs and Courses,” page 99.

Graduate College

www.asu.edu/graduate

Maria T. Allison, Ph.D., Interim Dean

Through the faculty, the ASU Graduate College offers programs to meet the educational needs of those who already hold baccalaureate and master’s degrees. While many students prepare for careers in research, the professions, and the arts, others study for personal enrichment. Both part-time and full-time students are enrolled in 95 master’s and 48 doctoral majors encompassing hundreds of concentrations and specialties. Other students explore new areas of interest or prepare for career advancements apart from formal degree programs.

The size, strength, and diversity of the graduate community reflect the university’s commitment to high-quality education. As a major center for graduate education, ASU supports cultural and intellectual activity as well as research in a broad range of arts and sciences and professional disciplines; in addition, the university conducts research addressing the social, cultural, and economic growth and development of Arizona and the Southwest.

One distinctive project that magnifies the Graduate College’s dedication to graduate students is the Preparing Future Faculty program, funded by the Pew Charitable Trusts and ASU. The program is designed to educate students about faculty roles and prepare doctoral students specifically for faculty positions in colleges and universities across the nation.

This past year, about 2,000 ASU graduate students were awarded prestigious fellowships and scholarships exceeding \$3.5 million. These awards were funded by the National Science Foundation, NASA, the Ford Foundation, Fulbright, and other public agencies and private foundations.

ASU assisted more than 2,800 outstanding graduate students through academic and tuition scholarship and other financial support programs. The total financial support amounted to \$15.5 million, exemplifying the university’s commitment to enabling student success.

Funded programs, together with more than 30 research centers and institutes, provide assistantships and training for many graduate students; further, the centers coordinate conferences, colloquia, and special seminars to heighten the learning experience. The Office of the Vice President for Research and Economic Affairs provides seed money to enable ASU faculty and students to work at the frontiers of knowledge. Such activities continually encourage the creative embrace of change and experimentation.

ASU provides numerous choices in student life, for personal enrichment, as well as cultural interaction. Many internationally known speakers present lectures here, bringing together faculty, graduate students, and the community to engage in stimulating dialogue.

Intellectual Environment. More than 10,000 students from all 50 states and more than 100 nations are enrolled in graduate study at the university. Such size and diversity contribute to a cosmopolitan setting that is ideal for intellectual discourse and stimulation. As a balance to this large grouping of students, individual graduate programs conduct small colloquia and seminars where students and faculty discuss their work in an intimate, intellectual environment supportive of student development. The result is a spirited, lively atmosphere in which students and faculty members get to know each other through collaborative research and intellectual exchange.

GRADUATE PROGRAMS

Degree Programs

Although graduate degree programs differ in many ways, they all share two important characteristics. First, in comparison to baccalaureate programs, they demand a deeper and broader understanding of a body of knowledge in a recognized discipline or profession. Second, especially in doctoral programs, graduate students prepare to make original contributions to their fields through research and other creative activities of a high order. In contrast, then, to the broad-based baccalaureate degree, graduate degrees are specialized. ASU offers several types and levels of postbaccalaureate degrees. For admission information and procedures, access the Web site at www.asu.edu/graduate/admissions, or refer to the *Application for Graduate Admission* booklet.

Master’s and Doctoral Work. Many students pursue a master’s degree to satisfy their own quest for learning. In some disciplines, such as dance or architecture, the master’s degree is normally the terminal or final degree. In other fields, students enter master’s programs as a step toward more advanced work, such as doctoral studies, that prepares students for a lifetime of intellectual inquiry and creativity or for the application of knowledge to professional practice.

Research Degrees. Students at ASU may pursue research-oriented or practice-oriented degrees. Research-oriented degree programs—the Master of Arts (M.A.), Master of Science (M.S.), and Doctor of Philosophy (Ph.D.)—prepare students for careers of research and scholarship in governmental, business, and industrial organizations or in university or college teaching. Students in these programs develop abilities to evaluate existing knowledge critically and extend it into fresh areas of inquiry and scholarship.

Professional Degrees. The professional or practice-oriented degree programs have slightly different names and distinct academic missions. The names of the degrees are commonly tied to the academic unit offering the program, for example, Master of Business Administration (M.B.A.), Master of Music (M.M.), Master of Social Work (M.S.W.), and Doctor of Education (Ed.D.). With the objective of preparing students for professional practice, such programs require rigorous preparation in the fundamental literature and scholarship of the field. Some degrees require demonstrated expertise through an internship, an exhibition (art), a performance (dance), or a recital (music). Examples of ASU fields in which academic units offer professional programs include architecture and design, business, education, engineering, health services administration, law, nursing, public administration, and social work.

Nondegree Graduate Study

Many students enter graduate studies without intending to obtain a new degree but rather to enhance personal or professional knowledge. These students may want to advance in their present careers, acquire the background to make a career change, or make up academic deficiencies before entering a degree program. All graduate students, degree or nondegree, enjoy the benefits of cultural and intellectual activities at the university, such as colloquia, seminars, and conferences focusing on the latest scholarship in the field. By consulting with appropriate academic units, students can learn which courses are suitable to their needs.

For admission information and procedures, access the Web site at www.asu.edu/graduate/admissions, or refer to the *Application for Graduate Admission* booklet.

Graduate Studies and the University Environment

The Graduate College spans the university in supervising graduate studies and offering all postbaccalaureate degrees except the Juris Doctor, which is administered by the College of Law, and graduate degrees offered by ASU West. Since more than 1,600 ASU faculty members teach graduate students in more than 100 instructional units, the Graduate College works closely with the other colleges and academic units. In most cases, graduate instruction is offered by units that also provide related undergraduate programs.

Interdisciplinary Study. Although most graduate programs are offered by academic units, diverse interdisciplinary programs cross academic disciplines and come under the supervision of the Graduate College. Many majors are in fields that are still emerging as recognized academic disciplines and, therefore, do not customarily form the academic bases for departments. Other fields of study are inherently interdisciplinary and do not fit well with con-

ventional disciplines around which departments are formed. Curricula must reflect intrinsically broad disciplinary affinities, and faculty must be drawn from more than one academic unit.

Currently, the Graduate College oversees 10 interdisciplinary programs; several others are planned. Existing programs include

1. Creative Writing (M.F.A.);
2. Curriculum and Instruction (Ph.D.), jointly administered with the College of Education;
3. Exercise Science (Ph.D.);
4. Geographic Information Science (certificate);
5. Justice Studies (Ph.D.);
6. Materials Science (M.S.);
7. Science and Engineering of Materials (Ph.D.);
8. Speech and Hearing Science (Ph.D.);
9. Statistics (M.S. and certificate); and
10. Transportation Systems (certificate).

Other interdisciplinary degree and certificate programs include

1. Atmospheric Science (certificate);
2. Communication (Ph.D.), administered by the College of Public Programs;
3. Environmental Design and Planning (Ph.D.), administered by the College of Architecture and Environmental Design;
4. Gerontology (certificate), jointly offered at ASU Main and ASU West.
5. History and Theory of Art (Ph.D.), jointly offered with the University of Arizona and administered by the School of Art;
6. Humanities (M.A.), administered by the College of Liberal Arts and Sciences;
7. Molecular and Cellular Biology (M.S., Ph.D.), administered by the College of Liberal Arts and Sciences; and

Each of these programs uses resources and faculty from several disciplines. The programs promote cooperative research and instruction among faculty who share common interests but are housed in different academic units and allow students to pursue degrees that are intellectually coherent but that bring together diverse strengths of the university. See the “Interdisciplinary Graduate Degrees and Majors Overseen by the Graduate College” table, page 54.

Certificate Programs

A number of certificate programs are offered by various academic units or programs on campus (see “ASU Graduate Certificates,” page 17).

Interdisciplinary Committee on Linguistics. Linguistics at ASU is interdisciplinary in nature, with faculty coming from the Departments of Anthropology, Computer Science and Engineering, English, Languages and Literatures, Philosophy, Psychology, and Speech and Hearing Science; the Hugh Downs School of Human Communications; and the College of Education.

COLLEGES

Interdisciplinary Graduate Degrees and Majors Overseen by the Graduate College

Major	Degree	Concentration	Administered By
Creative Writing	M.F.A.	—	Creative Writing Committee
Curriculum and Instruction	Ph.D. ¹	Art education, ² curriculum studies, early childhood education, elementary education, English education, exercise and wellness education, ³ language and literacy, mathematics education, music education, physical education, science education, special education	Interdisciplinary Committee on Curriculum and Instruction
Exercise Science	Ph.D.	Biomechanics, motor behavior/sport psychology, physiology of exercise	Committee on Exercise Science
Justice Studies	Ph.D.	Criminal and juvenile justice; dispute resolution; law, justice and minority populations; law, policy, and evaluation; women, law, and justice	Committee on Law and Social Sciences
Materials Science	M.S.	—	Committee on the Science and Engineering of Materials
Science and Engineering of Materials	Ph.D.	High-resolution nanostructure analysis, solid-state device materials design	Committee on the Science and Engineering of Materials
Speech and Hearing Science	Ph.D.	Developmental neurolinguistic disorders, neuroauditory processes, neurogerontologic communication disorders	Committee on Speech and Hearing Science
Statistics	M.S.	—	Committee on Statistics

¹ This program is administered in collaboration with the College of Education.

² This concentration is administered in collaboration with the Herberger College of Fine Arts.

³ Doctoral courses for this interdisciplinary program administered by ASU Main are offered at ASU East.

The Interdisciplinary Committee on Linguistics coordinates linguistics courses and programs, provides advising, and hosts conferences and lectures.

Faculty from three departments (Anthropology, English, and Languages and Literatures) offer programs with concentrations in linguistics: the M.A. in Anthropology, M.A. in English, M.A. in Spanish, and Master of Teaching English as a Second Language.

Research Programs

ASU continues to advance as a major research institution. The Office of the Vice President for Research and Economic Affairs provides leadership in obtaining external funding and in coordinating and administering sponsored projects. Many graduate students receive financial support and gain first-hand experience as they participate with faculty members in carrying out these research projects.

Much of this work is associated with campus research centers that help to develop proposals, coordinate activities, and bring together in colloquia and conferences students and faculty with common intellectual interests. Such centers include the Center for Solid State Science, the Institute for Manufacturing Enterprise Systems, the Institute of Human Origins, the Hispanic Research Center, the Joan and David Lincoln Center for Applied Ethics, and the Prevention Intervention Research Center. For more information, see “Research Centers, Institutes, and Laboratories,” page 32.

Research Facilities

The university lends support to research in diverse ways, including extensive facilities for research and instructional

programs. State-of-the-art facilities include an architecture building, a fine arts complex, the Goldwater Center for Science and Engineering, an addition to the Life Sciences Center, and the Computing Commons. The Engineering Research Center, built as part of the Engineering Excellence Program, houses advanced facilities such as the Molecular Beam Epitaxy laboratory and a clean room for microelectronic device fabrication. Among other facilities supporting research on campus are the Institute for Studies in the Arts, in the Herberger College of Fine Arts; the Facility for High Resolution Electron Microscopy, in the College of Liberal Arts and Sciences; and the Southwest Archaeological Collection, in the Department of Anthropology.

Library System. The ASU library system is a major research facility (see “University Library and Collections,” page 27). It contains more than 3 million volumes of books and approximately 6.6 million pieces of microforms and subscribes to more than 36,000 journals and serials. Among the nation’s research libraries, it is in the top quarter in annual volume acquisition. It is especially strong in amassing current monographs and serials to support graduate programs. Some of the most important research collections include manuscripts and rare photographs on Arizona and Southwest topics and an excellent collection of social science materials on Southwestern and border studies topics, including materials on northwestern Mexico. In the humanities, the main library has a fine collection of literary works and literary criticism from small and major presses in American and English literature. The Child Drama Collec-

tion is also outstanding. A growing rare book and manuscript collection supports the research interests of academic units. The Arthur Young Tax Library emphasizes accounting and law. The Noble Science and Engineering Library is a designated U.S. Patent Depository and as such is one of fewer than 30 U.S. academic libraries to receive copies of all new patents. The entire collection of U.S. patents in microfilm is housed in the Noble Library.

The libraries contain extensive U.S. and Arizona government documents and selected international documents.

Branch libraries provide important specialized collections. The Music Library contains scores and sound recordings. The Architecture and Environmental Design Library houses a nationally recognized set of materials on solar energy and research collections on the work of Frank Lloyd Wright and Paolo Soleri as well as other Arizona architects.

The libraries offer excellent support to researchers interested in electronic information sources. The online library system incorporates the usual catalog to ASU library holdings as well as several other important electronic reference databases and gateways. Bibliographic information on the library holdings can be accessed from any location in the world via a modem-equipped microcomputer.

The library system belongs to the Center for Research Libraries, permitting access to the center's vast collections of materials for extended loan periods.

Graduate Student Support Services

Providing academic and professional development support to graduate students is an important part of the Graduate College mission. Services include referral, individual mentoring for disadvantaged students, financial assistance, orientation sessions, workshops, career seminars, and research conferences.

Graduate College Student Programs/Services maintains a variety of programs specifically for graduate students (degree and nondegree). For more information, see the Graduate College Web site at www.asu.edu/graduate.

Graduate College Financial Assistance Office. The Graduate College Financial Assistance Office meets the needs of graduate and professional students. Students may receive financial services at Wilson Hall without having to visit other offices on campus. Students may obtain general information about graduate financial assistance at ASU, turn in documents, or receive status information on their student loans. Students can also apply for emergency short-term loans or pick up forms to report special circumstances. Staff members are available to help students with financial assistance concerns. For more information, see "Financing Graduate Studies," page 47, or access the Web site at www.asu.edu/graduate/financial.

Advising and Career/Professional Development. Many graduate students have questions and concerns about which degree to pursue; how to combine their student roles with parenting, partnering, and worker roles; and what to do with

their degrees upon graduation. The Graduate College provides the following resources.

Advising. The Graduate College's Advising/Referral Office offers general information about policies, procedures, requirements, and support services. Students with regular admission status should contact their academic unit for degree program advising and program of study planning.

Career/Professional Development Seminars. The Graduate College, in conjunction with Counseling and Consultation, offers seminars to groups of graduate students interested in exploring career-related subject matters. Examples of seminar topics include dual career issues, the impact of values on career decision making, and transferable skills.

Career Planning Services for Graduate Students. In conjunction with Career Services and Counseling and Consultation, the Graduate College provides a brochure listing numerous career planning services for graduate student needs. This publication is also available on the Career Services Web site at career.asu.edu.

Strategies for Success. The Strategies for Success series of professional development workshops is broken into three categories: teaching and instruction, career development, and enriching the graduate experience. These workshops are open to all registered graduate students.

Preparing Future Faculty. Preparing Future Faculty (PFF) is a program coordinated by the Graduate College for doctoral students who are seeking careers in the professorate. Originally a national initiative under the Council of Graduate Schools and the Association of American Colleges and Universities, PFF encourages fresh thinking and planning in faculty preparation, identifies strategies to improve the quality of teaching and learning, and orients doctoral students to different types of higher education institutions.

Preparing Future Professionals. The Preparing Future Professionals (PFP) program, administered by the Graduate College, assists doctoral students interested in pursuing nonacademic professions. PFP parallels the well-established and successful PFF program. Through a series of activities, PFP familiarizes doctoral students with various nonacademic career tracks to develop skills to successfully pursue a wide range of career opportunities.

Graduate College Support Program (GCSP). GCSP is designed to increase the number of graduate students from groups underrepresented in their chosen field of study.

The purpose of the program is to support research and creative activities related to a student's field of study. Nominations are made by departments, and recipients are supervised by a faculty member.

For students demonstrating financial need through a Free Application for Federal Student Aid, the Graduate College offers financial assistance and peer mentoring. GCSP is available primarily to first-year students. However, departments are asked to provide a student's subsequent funding. The program is based on financial need and the nominations of students by departments. Financial support is provided in the form of a federal work-study to support field-related

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research supervised by a faculty member. For additional academic support, a student meets weekly with an assigned peer mentor who is two or more years advanced in the academic program.

Diversity Programs. Diversity Programs are designed to increase the number of graduate students from groups underrepresented in certain fields of study. Students interested in these programs must first go to their respective departments for nomination.

The Social and Academic Mentor (SAM) Program. The SAM program is designed to recruit top graduate students from domestic, international, and underrepresented populations. Academic units submit applications to the Graduate College to nominate a first-year student (mentee) and peer mentor match. The mentor, two or more years advanced in the program, promotes the mentee's social and academic integration into graduate school by using a structured format. The mentor meets weekly with the mentee and schedules regular monthly meetings with the faculty advisor to discuss the mentee's concerns, progress, accomplishments, or department-related matters.

Orientations. Before each fall semester, the Graduate College hosts an orientation/reception for new graduate students.

All new teaching assistants (TAs) are required by the university and the Arizona Board of Regents to attend the TA Orientation conducted by the Graduate College. Additional professional development forums are held during the academic year and TAs are encouraged to participate.

Workshops for Undergraduate Students Considering Graduate Education. The Graduate College holds workshops to address issues that students contemplating graduate study should consider. The purpose of graduate study, the choices among research and professional degrees, the selection of schools to apply to, and the types and sources of financial support are among the topics discussed.

Student Organizations. The Graduate Student Council is part of the Associated Students of Arizona State University (ASASU), the student government for the university. The Graduate Research Support Office represents graduate student interests within ASASU and the Office of Student Life. It assists the Graduate College in planning orientations and other student-related activities. This office, with the Graduate College, also funds small research grants to support graduate students' thesis and dissertation projects. In addition to the council, many other special interest organizations are open to graduate students.

Format Office. The thesis, dissertation, or equivalent is the culmination of an important stage of graduate studies. By researching and writing this final work, graduate students are able to demonstrate acquired skills essential to a discipline. The Graduate College publishes a *Format Manual* as a guide in preparing the master's or doctoral document. The *Format Manual* and forms pertaining to procedures for completing all graduation requirements are available in the Graduate College lobby in Wilson Hall or on the Web at www.asu.edu/graduate/format.

Publications Program. The Graduate College publishes a number of brochures, fliers, and other items pertaining to academic program offerings, procedures, student financial assistance, and related topics and events in graduate education. For more information, call 480/965-3521.

ASU Graduate Council

The Graduate Council establishes general policies and standards for graduate programs and serves as an advisory board to the Graduate College dean. As part of its duties, the council reviews and makes recommendations regarding graduate academic program proposals. Sixteen faculty members and one student serve on the council, representing a wide variety of degree programs at ASU Main and ASU East. An Academic Senate representative is also elected to serve. Council members are appointed by the president of the university. For a listing of Graduate Council members, access the Web site at www.asu.edu/graduate/gradcouncil.

Offices of the Graduate College

The general offices of the college, including those of the dean, admissions, advising, financial assistance, and graduate academic services and programs, are located on the first floor of Wilson Hall. College offices are open Monday through Friday, from 8 A.M. to 5 P.M. The Graduate College may be called at 480/965-3521. The Web address is www.asu.edu/graduate.

Morrison School of Agribusiness and Resource Management

www.east.asu.edu/msabr

Raymond A. Marquardt, Ph.D., Dean

PURPOSE

The Morrison School of Agribusiness and Resource Management (MSABR) is committed to guiding students toward developing an integrated view of agribusiness, food systems, and environmental challenges that confront the world in the 21st century. Globalization, population growth, and new technologies require a sophisticated view toward the production, processing, storage, distribution, and marketing of food and fiber products. Prudent management of natural resources, to ensure that humanity's negative impact on the environment is mitigated, is becoming more and more important.

The Morrison School offers cutting edge programs enabling students to learn effective and responsible methods of agribusiness and environmental resource management. Strong relationships with industry and regulatory bodies afford students numerous opportunities to integrate theory and practice. This applied orientation traditionally makes MSABR students highly marketable upon graduation.

MSABR programs are accessible to full- and part-time students, with many courses taught both daytime and evenings. Some courses are taught in compressed formats and some online, helping students faced with growing time pressures. The faculty is committed to excellence in teaching, research and service, and strives to create a well-rounded experience for its students. The broad and diverse range of faculty research and teaching enables students to individualize their programs of study to fit their own particular career goals.

ORGANIZATION

The Morrison School offers the Master of Science degree in Agribusiness. The M.S. in Agribusiness degree is supported by faculty with backgrounds in agricultural economics, applied business, food science, rural development, international trade, and a variety of experiences in industry and organizations. Many faculty work closely with agribusiness and business-related firms and in international projects, giving real world relevance to their research.

GRADUATE PROGRAMS

The M.S. in Agribusiness degree has concentrations in (1) agribusiness management and marketing and (2) food quality assurance. The degree is designed to prepare students from a variety of backgrounds with a set of critical and analytical business skills while recognizing the unique demands of the agribusiness sector. Graduates are well prepared for successful administrative or managerial careers with either government or private-sector organizations. Students are able to select either a research-oriented program, which leads to the completion of an organized thesis, or a program consisting of course work only (nonthesis option). All students can develop an area of specialization and apply their skills to a real world agribusiness problem through an integrative, capstone course experience. Both the thesis and nonthesis options require the completion of a common set of core courses. For more information, access the Web site at www.east.asu.edu/msabr.

ADMISSION REQUIREMENTS

Application to the graduate program in Agribusiness requires further supporting materials pertaining solely to the degree. See "Agribusiness," page 102.

SPECIAL PROGRAMS

Peace Corps Master's International Program. The Morrison School has an agreement with the United States Peace Corps that makes combining graduate studies with Peace Corps service very appealing. Participants can receive up to six semester hours of credit for their independent field work while serving in the Peace Corps. Graduate course work precedes departure to foreign countries. Interested individuals must complete separate applications to ASU and the Peace Corps, and prepare plans of study with their faculty committees regarding studies in the field.

FACILITIES

In addition to the computing resources available to all students at ASU East, the Morrison School has laboratories dedicated to food safety and science. Laboratories are avail-

able to students for specific classes and related graduate thesis research.

ADVISING

Advising of graduate students is normally handled by graduate faculty members. Once admitted, a student can request a temporary faculty advisor in a potential area of concentration in order to prepare a program of study. Students are encouraged to begin discussions with faculty members early in their studies so that course work can be geared toward supporting their academic progress. All students, whether in a thesis or nonthesis option, must file a program of study.

College of Architecture and Environmental Design

www.asu.edu/caed

Ronald McCoy, M.Arch., Interim Dean

PURPOSE

The college provides graduate education for professional, research, and academic careers in architecture, design, landscape architecture, and environmental and urban planning. Students in the master's programs benefit from small classes, seminars, and studios, from close, individual contact and faculty mentorship, and from an interdisciplinary curriculum. Students and faculty make full use of the Phoenix metropolitan area and the Sonoran region as research bases, and they also profit from strong interaction with the professional communities. The faculty have earned national reputations in energy-efficient design, computer-assisted design, corporate interior design, design for special populations, urban design, and environmental policy. Programs of study, including internship and trainee opportunities, give graduates the best possible start on academic, research, and professional careers.

ORGANIZATION

The college has three academic units: the School of Architecture, the School of Design, and the School of Planning and Landscape Architecture. The units and their faculty have strong ties with programs and faculty in business, computer science, construction, engineering, fine arts, geography, biological sciences, environmental resources, and public affairs.

GRADUATE PROGRAMS

The Ph.D. degree program in Environmental Design and Planning is a collegewide interdisciplinary degree offered by faculty representing the different disciplines that make up the Schools of Architecture, Design, and Planning and Landscape Architecture. Environmental Resource faculty

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College of Architecture and Environmental Design Graduate Degrees and Majors

Major	Degree	Concentration	Administered By
Architecture	M.Arch.	—	School of Architecture
Building Design	M.S.	Design knowledge and computing, energy performance and climate-responsive architecture, facilities development and management	School of Architecture
Design	M.S.D.	Graphic design, industrial design, interior design	School of Design
Environmental Design and Planning ¹	Ph.D.	Design; history, theory, and criticism; planning	College of Architecture and Environmental Design
Environmental Planning	M.E.P.	Landscape ecological planning, urban and regional development, urban design ²	School of Planning and Landscape Architecture

¹ Doctoral courses for these interdisciplinary programs administered by ASU Main are also offered at ASU East.

² Applications are not being accepted at this time.

from ASU East also participate in offering this degree. Three areas of concentration are available: design; planning; and history, theory and criticism.

Faculty in the College of Architecture and Environmental Design offer four master's degree programs through the Graduate College: a professional program leading to the National Architectural Accrediting Board (NAAB)-accredited Master of Architecture degree (the two-year as well as three-plus-year programs); a research and applications M.S. degree in Building Design; the Master of Science in Design degree with concentrations in graphic design, industrial design, and interior design; and a professional graduate program leading to the PAB-accredited Master of Environmental Planning degree. Faculty in the School of Design offer the professional Master of Science in Design degree with concentrations in graphic design, industrial design, and interior design. Faculty in the School of Architecture offer the Master of Architecture and the M.S. degree in Building Design. Faculty in the School of Planning and Landscape Architecture offer the Master of Environmental Planning.

See the "College of Architecture and Environmental Design Graduate Degrees and Majors" table, on this page.

ADMISSION REQUIREMENTS

Applicants to each of the five graduate degree programs must meet Graduate College admission requirements, in addition to requirements of the academic unit offering the program. For application requirements and deadlines of the Graduate College, see "Admission to the Graduate College," page 84. For application requirements and deadlines of each program, refer to the specific program section within "Graduate Programs and Courses," page 99.

Doctor of Philosophy Degree in Environmental Design and Planning. Applicants to the Ph.D. program must have completed a master's degree in architecture, environmental resources, graphic design, industrial design, interior design, landscape architecture, or planning, or must be able to demonstrate equivalent standing. The degree is structured as a 54-semester-hour postmaster's program, and not as an 84-semester-hour postbaccalaureate program. The following test scores are required: Graduate Record Examination scores and Test of English as a Foreign Language (TOEFL)

score of at least 600 (250 for the computer-based version), from applicants whose native language is not English.

Master of Architecture Degree. Admission as a graduate student to the Master of Architecture program is a two-part process and is granted only with the approval of both the Graduate College and the School of Architecture.

Regular admission to the Master of Architecture program is open to applicants who have completed a four-year Bachelor of Science degree with a major in Architectural Studies or similar preprofessional degree in Architecture. The degree must be granted by an institution with an NAAB-accredited degree program in Architecture.

Admission to the three-plus-year Master of Architecture program has similar two-part application procedures. This is an NAAB-accredited program designed for applicants with bachelor's degrees in fields unrelated to architecture. The program begins with a 10-week summer program followed by three academic years.

Master of Science Degree in Building Design. Admission as a graduate student to the Master of Science degree in Building Design program is a two-part process and is granted only with the approval of both the ASU Graduate College and the School of Architecture.

Students with a previous NAAB-accredited professional degree in Architecture who wish to pursue advanced study and research should apply to the Master of Science degree in Building Design program.

Master of Environmental Planning Degree. Applicants must hold a baccalaureate degree. International applicants whose native language is not English must achieve a TOEFL score of 550 or above on the paper-based test and 213 or above on the computer-based test.

Master of Science in Design Degree. Applicants must hold a baccalaureate degree in graphic design, industrial design, interior design, or a related design discipline as determined by the School of Design Graduate Program Committee. International applicants whose native language is not English must achieve a TOEFL score of 550 or above on the paper-based test and 213 or higher on the computer-based test.

SPECIAL PROGRAMS

A concurrent Master of Architecture/Master of Business Administration degree program is available. The School of Architecture offers a foreign study abroad program. Also, a selective summer internship program places highly qualified students in nationally known American firms.

The Master of Environmental Planning program has special ties with the professional planning community and offers students considerable interaction with practitioners in the field, as well as experience in local planning offices and agencies.

All of the master's programs are interdisciplinary in focus and require or strongly recommend course work in other programs, departments, and colleges. Each program works with affiliated and associated faculty from other units within the college. Also, faculty from such areas as geography, engineering, public affairs, business, transportation, environmental studies, and fine arts collaborate with the faculty and graduate students of the college.

COLLEGE FACILITIES

With the opening of the award-winning expansion to the Architecture building in spring of 1989, the college consolidated its facilities into a single complex and more than doubled the space available for instruction, research, and service activities. Expanded facilities include the library, the shop, studios, faculty and administrative offices, and research facilities. Research and special project rooms include a high-bay research laboratory, a lighting laboratory, community outreach and design excellence studios, a materials resource center, as well as a solar instrumentation laboratory and a rooftop outdoor solar and day lighting testing area. The college is especially proud of its computer facilities and the faculty-graduate student computer research laboratory. There is a local area network that ties together faculty, studio, and library resources. Emphasis is on mini- and microcomputer modeling, simulation, and design applications (see "Computing Facilities and Services," page 30). Teaching and research activities are also supported by a media center with photography and video services and a slide and media library. Individual studio work space is available to graduate students and the expansion features extensive jury, review, and display space.

The Gallery of Design is one of eight university galleries and museums. It provides premium space for traveling exhibitions and exhibitions of student and faculty work.

Housed in the College of Architecture and Environmental Design/North building, the college's Design Library has a spacious and welcoming interior, with cherry wood furnishings. A branch of the University Libraries, the Architecture and Environmental Design (AED) Library provides access to books, periodicals, reference materials, and product catalogs. The collection includes approximately 35,000 volumes. There are also 150 current periodical subscriptions available. ASU Libraries provide access to numerous online databases, including the *Avery Index to Architectural Periodicals*.

Rare and unusual materials related to architecture and environmental design reside in the Special Collections area.

Notable among these are the extensive collections of books and ephemera on Paolo Soleri and Frank Lloyd Wright.

The rapidly growing Archival Drawings Collection is also part of the AED Library's Special Collections area. Included are the archival drawings and papers of several noteworthy architects, including Alfred N. Beadle, William P. Bruder, Blaine Drake, Albert Chase McArthur, Victor Olgyay, Paul Schweikher, Calvin Straub, Marcus Whiffen, and Martin Ray Young, Jr. The Archival Drawings Collection also contains documentation of the company town of Litchfield Park, the Rio Salado Project, the Phoenix Civic Plaza design competition, and the Metropolitan Canal Alliance.

ADVISING

Architecture. Students should consult the school's Web site at www.asu.edu/caed/SOA for general information about the programs and procedures. In addition, a graduate coordinator is available for professional advising. For more information, call 480/965-3536, or send e-mail to arch.grad@asu.edu. For information about the graduate program and for undergraduate advising, send e-mail to caed.advising@asu.edu.

Design. Preadmission information, advising, and continued support are provided by the director of the school and the graduate program coordinator. Call 480/965-4135 for more information.

Planning. The school's academic advisor provides preadmission information, general program information and procedures, and general advising. The school's director and M.E.P. program coordinator provides program information, professional advising, and continued support. For more information, call 480/965-7167, or access the school's Web site at www.asu.edu/caed.

ACCREDITATION

In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The NAAB (www.naab.org), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes two types of degrees: the Bachelor of Architecture and the Master of Architecture. (A program may be granted a five-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established educational standards.)

Master's degree programs may consist of a preprofessional undergraduate degree and a professional graduate degree, which, when earned sequentially, compose an accredited professional education. However, the preprofessional degree is not, by itself, recognized as an accredited degree.

The Master of Architecture program at ASU is fully accredited by the NAAB. The Master of Architecture requires a minimum of three years of study following an unrelated bachelor's degree or two years following a related preprofessional bachelor's degree. This professional degree is structured to educate those who aspire to registration/licensure as architects.

COLLEGES

The School of Architecture is a full member of the Association of Collegiate Schools of Architecture and the Architectural Research Centers Consortium.

The programs in the School of Planning and Landscape Architecture are affiliated with the Association of Collegiate Schools of Planning and the Council of Educators in Landscape Architecture.

The Master of Environmental Planning and the Bachelor of Science in Planning Programs are accredited by the Planning Accreditation Board while the Bachelor of Science in Landscape Architecture program is accredited by the Landscape Architecture Accreditation Board.

W. P. Carey School of Business

wpcarey.asu.edu

PURPOSE

The W. P. Carey School of Business is a professional school that pursues excellence in instruction and research. The pursuit of excellence in programs of instruction implies that the school admits only students who are especially well qualified for the study of business and who will, upon graduation, compete successfully for highly desirable positions, both nationally and internationally.

The mission of the W. P. Carey School of Business is to expand the knowledge of business and to educate men and women for managerial leadership through research activities and professional educational programs that address issues of importance to future managers in a world characterized by racial, cultural, and gender diversity in the work force; demands for continuous improvements in quality; growing technological sophistication; and globalized markets.

The W. P. Carey School of Business is a comprehensive research school of business that selects and retains faculty based on their ability to use their teaching and research skills to fulfill its mission.

The W. P. Carey School of Business—through its research support, its Seidman Institute programs and centers, and its doctoral programs—develops knowledge that is important to managers and the management of organizations. It endorses joint research projects that are not only supported by business but include managers as partners in the research objectives, processes, and outcomes.

The W. P. Carey School of Business anticipates that its mission will lead to research and professional degree programs that will result in its being recognized among the top schools of business in the U.S. Strategies to achieve its mission include an emphasis on the M.B.A. degree: increasing its quality such that it is competitive with the best 25 programs found at other large public schools of business and

developing a curriculum that incorporates the knowledge, skills, and abilities identified in the mission of the school.

Strategies relative to the doctoral program also include raising admission standards, increasing stipends, and assuring that students possess the teaching and research skills necessary for placement at peer schools of business. Consistent with the mission, an additional strategy is to improve the retention and graduation rates of minority students through programs at the M.B.A. and doctoral levels.

Finally, the school will, through its Seidman Institute, increase the level of funded research by adding support services to facilitate grant preparation and by clarifying the mission of research centers as liaisons between faculty and businesses.

ORGANIZATION

The school's seven academic units and several centers serve more than 1,400 graduate students enrolled in eight graduate degree programs. Academic units contributing to graduate offerings include the School of Accountancy and Information Management, the School of Health Administration and Policy, and the Departments of Economics, Finance, Management, Marketing, and Supply Chain Management. The Seidman Institute serves as the school's focal point for applied research, and several centers are organized in conjunction with the Seidman Institute: the Arizona Real Estate Center, the Bank One Economic Outlook Center, CAPS Research, the Center for Business Research, and the Center for Services Leadership.

GRADUATE PROGRAMS

The M.B.A. program is the premier professional degree in the W. P. Carey School of Business. The school offers the traditional full-time program, an Executive M.B.A. program, an evening program for working managers, and a program for high technology professionals. The faculty also offer the Ph.D. degree in Economics and in Business Administration, with concentrations in accountancy, computer information systems, finance, health services research, management, marketing, and supply chain management. Other master's offerings include the Master of Accountancy and Information Systems, Master of Health Services Administration, and M.S. degrees in Economics and in Information Management, an interdisciplinary program leading to an M.S. degree in Statistics, and the Master of Taxation.

See the "W. P. Carey School of Business Graduate Degrees and Majors" table, page 61.

ADMISSION REQUIREMENTS

Applicants to all degree programs must meet the minimum Graduate College academic requirements. Admission is highly competitive and selective. Acceptance is based on the applicant's previous college record, all relevant data provided with the application, and scores from the Graduate Management Admission Test or the Graduate Record Examination (GRE). (GRE scores are required for the Economics programs only.) Certain degree programs require applicants to submit a statement of purpose and letters of recommendation. In addition, the Test of English as a Foreign Lan-

W. P. Carey School of Business Graduate Degrees and Majors

Major	Degree	Concentration	Administered By
Accountancy and Information Systems	M.A.I.S.	—	School of Accountancy and Information Management
Business Administration	M.B.A. Ph.D.	— Accountancy, computer information systems, finance, health services research, ¹ management, marketing, supply chain management	W. P. Carey School of Business W. P. Carey School of Business
Economics	M.S., Ph.D.	—	Department of Economics
Health Services Administration	M.H.S.A.	—	School of Health Administration and Policy
Information Management	M.S.	—	School of Accountancy and Information Management
Public Health ²	M.P.H.	Community health practice, ³ health administration and policy	School of Health Administration and Policy
Statistics ⁴	M.S.	—	Committee on Statistics
Taxation	M.Tax.	—	School of Accountancy and Information Management

¹ Applications are not being accepted at this time.

² This collaborative program is offered by the three state universities. Another concentration is offered by the College of Nursing.

³ This concentration is administered by the College of Nursing.

⁴ This program is administered by the Graduate College.

guage is required of international applicants whose native language is not English.

SPECIAL PROGRAMS

Concurrent and Dual Degree Programs. The W. P. Carey School of Business and the American Graduate School of International Management (Thunderbird) have developed a dual degree for students interested in both business administration and international management. Thunderbird is an internationally recognized private graduate school, located in the Phoenix metropolitan area, offering course work in international studies, modern languages, and world business. The dual degree program is designed to allow a limited number of qualified graduate students to pursue an M.B.A. degree at ASU and a Master of International Management (M.I.M.) degree at Thunderbird, concurrently allowing students to earn two degrees in less time than if done separately. Applicants must be regularly admitted to both programs and may begin at either location.

The W. P. Carey School of Business also offers dual degree programs with the Graduate School of Commerce in Toulouse, France; Carlos III University of Madrid in Spain; Monterrey Institute for Technical and Superior Studies in Mexico City, Mexico; and the Graduate School of Business Administration in Peru. Call 480/965-3332 for more information.

The school also offers the following concurrent degrees:

1. Master of Science (M.S.) in Economics/Juris Doctor (J.D.);
2. M.B.A./J.D.;
3. M.B.A./Master of Accountancy and Information Systems;

4. M.B.A./Master of Architecture;
5. M.B.A./M.S. in Information Management;
6. M.B.A./Master of Health Services Administration;
7. M.B.A./M.S. in Economics; and
8. M.B.A./M.Tax.

Separate applications are required for each degree, and each application is reviewed independently. It is recommended that the student apply simultaneously to both of the concurrent degree programs. The M.B.A./J.D. is best completed by attending one year in the law school, then attending the M.B.A. program after the first or second year, and finally returning to the law school to complete the third year. Students are not admitted from the law school after the third year.

INSTITUTES/RESEARCH CENTERS

L. William Seidman Research Institute. The L. William Seidman Research Institute encourages, promotes, and supports multidisciplinary, cross-disciplinary, and applied research on a wide range of business topics. The institute serves as the “port-of-entry” for applied business research in the W. P. Carey School of Business as well as an incubator to transfer knowledge to the business community. The institute also acts as a facilitator for postdoctoral, continuing, and executive business education that is taught by ASU faculty. In addition, the institute contributes funding for operations.

Arizona Real Estate Center. The Arizona Real Estate Center collects and analyzes data concerning the multifaceted real estate market to provide insight into solutions for problems confronting the real estate industry.

COLLEGES

Bank One Economic Outlook Center. The Bank One Economic Outlook Center serves as the economic forecasting unit of the school and is responsible for the publication of the Arizona Blue Chip, Western Blue Chip, Mexico Blue Chip, Greater Phoenix Blue Chip, and Blue Chip Job Growth Update.

CAPS Research. CAPS Research is a national affiliation agreement between the W. P. Carey School of Business at ASU and the Institute for Supply Management. The center conducts in-depth research into the problems facing the purchasing profession today and the requirements of the future.

Center for the Advancement of Small Business. Endowed with private funding, the center's mission is to enhance the formation and management of small- and medium-size companies to enable them to compete in the global economy of the 21st century. The primary goal is to ensure that ASU students from all disciplines are provided with programs that prepare them for positions of leadership in small- and medium-size businesses.

Center for Business Research. The Center for Business Research collects, analyzes, and disseminates information on the economy and business climate of Arizona. Analyses of Gross State Product, prices, income, employment, and demographic data for Arizona are made available to business and the general public. The center coordinates interdisciplinary sponsored-research efforts to provide useful information to business and a learning experience for students and faculty researchers.

Center for Services Leadership. The Center for Services Leadership is North America's leading university-based center for the study of services marketing and management. The center conducts extensive research in the field; offers specialized education and training to services executives; and provides the latest services information to organizations engaged in banking, insurance, health care, tourism, transportation, and other service industries. Its charter members include some of America's foremost services firms and non-services firms.

Institute for Manufacturing Enterprise Systems. The Institute for Manufacturing Enterprise Systems is a joint venture of the W. P. Carey School of Business and the College of Engineering and Applied Sciences. The institute was established to enhance manufacturing research and industrial collaboration between the two colleges. The mission of the institute involves integrating aspects of manufacturing in both the business and engineering areas, helping to fulfill ASU's goal of becoming one of the leading educational and research institutions in both manufacturing enterprise and manufacturing process technology issues.

M.B.A. Council. The M.B.A. Council plays an active role in linking students with alumni to enhance the M.B.A. student experience. The M.B.A. Council also assists to unite alumni and promote the national reputation of the M.B.A. program.

Washington Campus. Founded in 1978 by William Seidman and other leaders in business, government, and higher education, the Washington Campus is a nonpartisan,

not-for-profit organization committed to educating business executives on the public policy process. The campus is a consortium of the business schools of 17 U.S. universities. Located in Washington, D.C., it draws upon the unique resources of the nation's capital to provide business-oriented education on the institutions and decision-making processes of government. Participants earn graduate credit, observe the intricacies of national politics, and enjoy the excitement of the nation's capital.

SCHOOL FACILITIES

The W. P. Carey School of Business offers one of the most modern and sophisticated environments available for professional graduate study. The school facilities provide attractive and comfortable classrooms, computer systems, study areas, a television studio, modern auditoriums, and a graduate student resource suite. Both mainframe interactive and networked microcomputer facilities, in addition to wireless capabilities, are available to graduate students throughout the two business buildings. See "Computing Facilities and Services," page 30.

ADVISING

Information sessions are held daily (Monday, Wednesday, and Friday at 10 A.M., Tuesday at 5:30 P.M. and Thursday at 2 P.M.) in the M.B.A. Program Office, BA 160. For more information about information sessions, send e-mail to mba.infoession@asu.edu. Summer hours may vary. M.B.A. brochures may be obtained at the office; call 480/965-3332, or send e-mail to wpcarey.mba@asu.edu.

ACCREDITATION

The W. P. Carey School of Business and its School of Accountancy and Information Management are accredited by AACSB International—The Association to Advance Collegiate Schools of Business. AACSB International is the recognized accrediting agency in the field of business education. The School of Health Administration and Policy is accredited by the Accrediting Commission on Education for Health Services Administration.

East College

www.east.asu.edu/ecollege

David E. Schwalm, Ph.D., Dean

PURPOSE

East College is the academic home for ASU East undergraduate and graduate programs outside of agribusiness and technology. The college also provides general studies and other supporting course work for all students enrolled at ASU East. East College offers 11 undergraduate and three graduate degrees.

East College Graduate Degrees and Majors

Major	Degree	Concentration	Administered By
Applied Psychology	M.S.	—	East College
Curriculum and Instruction*	Ph.D.	Exercise and wellness education	Interdisciplinary Committee on Curriculum and Instruction
Environmental Design and Planning*	Ph.D.	Design; history, theory and criticism; planning	Committee on Environmental Design and Planning
Environmental Resources	M.S.	GIS/remote sensing, natural resource management, range ecology	Department of Applied Biological Sciences
Exercise and Wellness	M.S.	—	Department of Exercise and Wellness
Nutrition	M.S.	—	Department of Nutrition

* Doctoral courses for this interdisciplinary program administered by ASU Main are offered at ASU East.

ORGANIZATION

East College is organized into eight faculties or departments:

Applied Biological Sciences, Department of Applied Psychology, Faculty of Business Administration, Faculty of Elementary Education, Faculty of Exercise and Wellness, Department of Human Health Studies, Faculty of Multimedia Writing and Technical Communication, Faculty of Nutrition, Department of

GRADUATE PROGRAMS

Graduate degree programs, as shown in the “East College Graduate Degrees and Majors” table, on this page, are offered by the faculty within the college.

ADMISSION REQUIREMENTS

Applicants to East College graduate degree programs must meet the minimum Graduate College academic requirements. Individual programs may require additional supporting materials. Applicants should refer to requirements specified by each East College graduate degree program.

COLLEGE FACILITIES

East College is located at ASU East, the newest of the ASU campuses. The easily accessible campus offers students modern mediated classrooms, state-of-the-art computer facilities, electronic access to library resources, and a range of on-campus housing options. ASU East students also have access to ASU Main resources and research facilities. A shuttle runs regularly between the two campuses.

ADVISING

Career advising is available on campus and through Career Services at ASU Main. Academic advising is provided by the department offering the degree program.

College of Education

coe.asu.edu

Eugene E. Garcia, Ph.D., Dean

PURPOSE

The College of Education plays an essential role as a member of the ASU, pre K–12, and related private and public sector agents that form a broad-based educational community. Faculty members are dedicated to producing quality scholarship and research that lead to excellence in teaching, professional practice, and the administration of educational institutions.

The mission and purpose of the College of Education is to provide leadership in advancing the theoretical base of education; addressing issues of fundamental importance, particularly in school settings; and promoting the improvement of educational practice. It does so within a coherent, integrated, and collaborative set of strategies emphasizing excellence in scholarship, teaching, and professional development.

This mission can be further articulated into several goals:

1. addressing the challenge of diversity in educational contexts so as to ensure equity and excellence for all students;
2. understanding fundamental literacies (linguistic, cultural, mathematical, scientific, and technological) and how to foster them; and
3. developing and elaborating research in complex social settings in and out of schools and utilizing that research to prepare educational professionals who can respond to the challenges inherent in those settings.

This mission and its related goals now reside in a reinvigorated context where the college and university work together with significant partners in the K–12 sector, as well as with constituents dedicated to the same purposes.

COLLEGES

ORGANIZATION

The College of Education is organized into three divisions. The divisions and their academic programs are listed below.

Division of Curriculum and Instruction

Carlos Julio Ovando, Associate Dean and Director
(ED 426) 480/965-1644
coe.asu.edu/programs

Research Clusters. Research clusters have been established for existing concentration areas to promote and develop support of academic scholarly interests. Cluster areas include: curriculum studies, early childhood, equity and diversity and citizenship, gender, language and literacy, mathematics, middle level interest, science education, special education, and teacher education.

Graduate programs offered by faculty of the Division of Curriculum and Instruction, through the Graduate College, prepare students for positions in schools, colleges, universities, government agencies, and public or private organizations. Graduates work as educational leaders, researchers, media and computer specialists, and librarians.

The Division of Curriculum and Instruction offers undergraduate and postbaccalaureate programs that prepare students for Arizona State teacher certification in the following areas: special education, elementary, or secondary education. Programs leading to endorsements in bilingual education and English as a second language are also available. Postbaccalaureate programs are designed for students who have graduated from accredited colleges or universities with majors other than education. In some instances, a master's degree may be pursued concurrently with teacher certification.

The M.A. and M.Ed. degrees in Curriculum and Instruction offer areas of concentration in bilingual education, early childhood education, elementary education, English as a second language, Indian education, language and literacy, mathematics education, science education, secondary education, and social studies education. The M.Ed. offers a concentration in professional studies.

The Ed.D. degree in Curriculum and Instruction offers areas of concentration in bilingual education, curriculum studies, early childhood education, English as a second language, Indian education, language and literacy, mathematics education, science education, and social studies education. Application to the elementary education and secondary education concentrations are not being accepted at this time.

The division is committed to research. Members of the faculty edit several national, scholarly journals; publish and present research papers; and direct funded research. Faculty members encourage and assist graduate students in conducting research, writing for publication, and making presentations at professional conferences. Particular research interests of the faculty are noted under each degree major.

Division of Educational Leadership and Policy Studies

Terrence Wiley, Director
(ED 120) 480/965-6357
coe.asu.edu/programs

Program Areas

Education Policy Studies
Educational Administration and Supervision
Higher and Postsecondary Education
Social and Philosophical Foundations of Education

Degrees:

M.A., M.Ed., Ed.D., Ph.D.

Graduate programs in this division are designed to develop leaders, researchers, and policy analysts for careers in schools, colleges, and private and government agencies. Graduates will be able to examine educational institutions, theories, and practices within broad economic, historic, political, socially and culturally diverse, and intellectual contexts in this country and abroad.

Four basic emphases exist within the division's programs. One strand focuses on the administration and policies of educational practices from preschool through secondary education. A second strand focuses on the administration and policies of postsecondary education. A third strand focuses on social and philosophical foundations, and a fourth strand focuses on interdisciplinary policy studies in education. Specific details of these strands are given under the headings of the degree offerings in Educational Administration and Supervision, Educational Leadership and Policy Studies, Higher and Postsecondary Education, and Social and Philosophical Foundations.

Faculty within the division are involved in both data-based and theoretical research. Qualitative, quantitative, and critical theory paradigms are employed. Students have the opportunity to work on research projects in the College of Education and in school districts and educational agencies throughout the country.

Division of Psychology in Education

Elsie Moore, Director
(EDB 302) 480/965-3384
coe.asu.edu/programs

Program Areas

Counseling
Counseling Psychology
Counselor Education
Educational Psychology
Learning
Lifespan Developmental Psychology
Measurement, Statistics, and Methodological Studies
School Psychology
Educational Technology

Degrees:

M.A., M.Ed., M.C., Ph.D.

All program areas within this division strongly emphasize research activities. Areas of concentration within the Ph.D. in Educational Psychology include learning; lifespan developmental psychology; measurement, statistics, and methodological studies; and school psychology. The Ph.D. program in Counseling Psychology and Educational Psychology concentration in school psychology are accredited by the American Psychological Association and are based upon the scientist-practitioner model. The Master of Counseling program in community counseling is accredited by the Council

for the Accreditation of Counseling and Related Educational Programs (CACREP).

Members of the faculty are actively involved in a variety of research and other scholarly activities, including basic and applied educational research, editing and reviewing for a number of refereed journals, publishing and presenting research papers, and seeking external funding for research projects. The faculty encourage and assist graduate students' research, publications, and presentations at professional conferences. Particular research interests of the faculty are noted under each degree major.

GRADUATE PROGRAMS

The College of Education offers degrees for the practitioner and for the academic researcher. The Master of Education and the Doctor of Education are designed for teachers and other practitioners working directly with students and schools. The Master of Counseling is designed to prepare helping professionals for work in a variety of counseling settings. The M.A. and Ph.D. degrees are designed for persons interested in careers in universities and other research settings. The M.A. and Ph.D. programs emphasize theory development, research methods, and acquisition of a broad base of knowledge about education, as well as in-depth knowledge of a chosen field of specialization.

The Interdisciplinary Committee on Curriculum and Instruction offers an interdisciplinary graduate program leading to the Ph.D. degree in Curriculum and Instruction. Areas of concentration are as follows: art education, curriculum studies, early childhood education, elementary education, English education, exercise and wellness education, language and literacy, mathematics education, music education, physical education, science education, and special education. The interdisciplinary committee sets guidelines and supervises programs of study, while an executive committee, appointed by the dean of the College of Education and the dean of the Graduate College, has primary responsibility for the operation of the program. It is composed of faculty representing the various concentrations.

Most graduate programs of the College of Education include a core of courses designed to give students an understanding of the context of American education and of the methods of scholarship by which the understanding of the educational system is deepened.

Core course requirements along with specific requirements for the various types of degrees are given under the appropriate majors. See the "College of Education Graduate Degrees and Majors" table, page 66. The table presents a summary of those degrees authorized by the Arizona Board of Regents. Contact the division offices for further information about degrees offered through each faculty group.

ADMISSION REQUIREMENTS

Applicants must meet the general admission requirements established by the Graduate College. For the M.Ed. and M.C. degrees, test scores from the Miller Analogies Test or the Graduate Record Examination are required.

Individual divisions or programs may have admission standards higher than these minimums. Also, some units are limited by the number of faculty members or resources they

have, and in keeping with the college's goals of providing a high quality education for all enrolled students, only a small proportion of the qualified students who apply are admitted. Students should consult the division director or program coordinator for specific admission requirements.

SPECIAL PROGRAMS

Research and services to students and the community are provided through two centers authorized by the Arizona Board of Regents: the Southwest Center for Education Equity and Language Diversity and the Center for Indian Education. The College of Education offers graduate course work pertaining to the development and education of children and youth from diverse cultural, linguistic, and racial/ethnic populations. Faculty affiliated with multicultural education are actively involved in research related to effective schooling for children of Hispanic American and American Indian heritage, parents as partners in education, bilingual education, and English as a second language.

For more information regarding the Southwest Center for Education Equity and Language Diversity, call 480/965-7134, or access the Web site at www.asu.edu/educ/sceed. For more information about the Center for Indian Education, call 480/965-6292, or access the Web site at coe.asu.edu/cie.

The college's Technology Based Learning and Research Facility conducts research activity related to software evaluation and the use of microcomputers in schools. For more information, call 480/965-3322.

CERTIFICATION AND ENDORSEMENT

Postbaccalaureate programs that lead to Initial Teacher Certification (ITC) are designed for people who hold bachelor's degrees in areas other than education. ITC programs are available in the following areas: early childhood education, elementary education, multilingual/multicultural education, secondary education, and special education. (Special education students must qualify for, and be concurrently admitted to, a master's degree program in Special Education. For more information, call 480/965-4602.) For more information on postbaccalaureate programs, visit the Office of Student Services in EDB L1-13, or call 480/965-5555. Endorsements that are added to middle-grade endorsement teaching certificates are available in bilingual education, educating the gifted, English as a second language, library science, middle school education, and reading. Programs that prepare students for certification by the state as a school counselor are offered by the Counselor Education Program. Programs that prepare students for certification by the state as a supervisor, principal, or superintendent are offered by the Division of Educational Leadership and Policy Studies. See "Educational Leadership and Policy Studies," page 186.

COLLEGE FACILITIES

In addition to the special programs mentioned earlier, other administrative units and centers provide services to students and the community. These include the College of Education Preschool, which provides young children a variety of learning experiences designed to encourage the

COLLEGES

College of Education Graduate Degrees and Majors

Major	Degree	Concentration	Administered By
Counseling	M.C.	—	Division of Psychology in Education
Counseling Psychology	Ph.D.	—	Division of Psychology in Education
Counselor Education	M.Ed.	—	Division of Psychology in Education
Curriculum and Instruction	M.A.	Bilingual education, early childhood education, elementary education, English as a second language, Indian education, language and literacy, mathematics education, science education, secondary education, social studies education	Division of Curriculum and Instruction
	M.Ed.	Bilingual education, early childhood education, elementary education, English as a second language, Indian education, language and literacy, mathematics education, professional studies, science education, secondary education, social studies education	Division of Curriculum and Instruction
	Ed.D.	Bilingual education, curriculum studies, early childhood education, elementary education, ¹ English as a second language, Indian education, language and literacy, mathematics education, science education, secondary education, ¹ social studies education	Division of Curriculum and Instruction
	Ph.D. ²	Art education, ³ curriculum studies, early childhood education, elementary education, English education, exercise and wellness education, ⁴ language and literacy, mathematics education, music education, physical education, science education, special education	Interdisciplinary Committee on Curriculum and Instruction
Educational Administration and Supervision	M.Ed., Ed.D.	—	Division of Educational Leadership and Policy Studies
Educational Leadership and Policy Studies	Ph.D.	—	Division of Educational Leadership and Policy Studies
Educational Psychology	M.A., M.Ed.	—	Division of Psychology in Education
	Ph.D.	Learning; lifespan developmental psychology; measurement, statistics, and methodological studies; school psychology	Division of Psychology in Education
Educational Technology	M.Ed., Ph.D.	—	Division of Psychology in Education
Higher and Postsecondary Education	M.Ed., Ed.D.	Higher education	Division of Educational Leadership and Policy Studies
Social and Philosophical Foundations of Education	M.A.	—	Division of Educational Leadership and Policy Studies
Special Education	M.A.	—	Division of Curriculum and Instruction
	M.Ed.	Gifted, mildly disabled, multicultural exceptional, severely/multiply disabled	Division of Curriculum and Instruction

¹ Applications are not being accepted at this time.

² Program is administered in collaboration with the Graduate College.

³ This concentration is administered in collaboration with the Herberger College of Fine Arts.

⁴ Doctoral courses for this interdisciplinary program administered by ASU Main are offered at ASU East.

development of thinking skills, intellectual curiosity, creative expression, and the foundation upon which academic skills will later be built. The preschool provides on-site observation opportunities for students preparing to become early childhood teachers. For more information, call 480/965-2510.

The Counselor Training Center provides counseling for ASU students, faculty, staff, and the community at large, regarding a wide range of issues, including anxiety, depression, personal relationships, and career development. Counseling is conducted by graduate students in counseling and counseling psychology under the supervision of licensed psychologists. For more information, call 480/965-5067, or access the Web site at coe.asu.edu/ctc.

Education Policy Studies Laboratory. Located within the College of Education, the Education Policy Studies Laboratory (EPSL) conducts and coordinates original research in areas such as student performance standards and language policy issues, assessment, curriculum, and commercialism in schools. EPSL disseminates its analyses and reports to policy makers and educators and the public. It provides high quality research through four specialization units and an online journal.

EPSL houses two research units: (1) the Commercialism in Education Research Unit, which is the only national academic research center dedicated to schoolhouse commercialism, and (2) the Education Policy Research Unit, which conducts original research and facilitates implementation of educational innovations.

For more information, contact the director of Educational Leadership and Policy Studies, EDB L1-01, call 480/965-1886, or access the laboratory's Web site at asu.edu/educ/epsl.

ADVISING

General career advising in a program can be obtained by contacting the director of the division or the coordinator of the program in which a degree is offered. After admission to a degree program, specific advice related to degree activities is provided by supervisory committees. Postbaccalaureate students pursuing their teaching certification are advised by the Office of Student Services in EDB L1-13. Call 480/965-5555 to schedule an appointment.

ACCREDITATION AND AFFILIATION

The Ph.D. programs in Counseling Psychology and the Educational Psychology concentration in school psychology are accredited by the American Psychological Association. The school psychology program is also approved by the National Association of School Psychologists. The Master of Counseling is accredited by the Council for Accreditation of Counseling and Related Educational Programs. The College of Education is approved by the State Board of Education (Arizona). The college is affiliated and has membership with the American Association of Colleges for Teacher Education, the American Educational Research Association, and the University Council for Educational Administration.

College of Engineering and Applied Sciences

www.eas.asu.edu

Peter E. Crouch, Ph.D., Dean

PURPOSE

Faculty in the College of Engineering and Applied Sciences offer opportunities for graduate study through the Del E. Webb School of Construction and the School of Engineering. Degrees offered include the Master of Engineering (a tri-university degree program); the Master of Science in Engineering; the M.S. in the fields of computer science, construction, and engineering; the Master of Computer Science; and the Ph.D. in the fields of engineering and computer science.

The primary purpose of a graduate education is to provide the student with advanced training for a professional, teaching, or research career. The graduate program in the School of Engineering is designed to bridge the gap between knowledge of engineering sciences and creative engineering practice, while at the same time increasing the student's depth and breadth of knowledge in an area of emphasis. The performance of scholarly research and the acceptance of professional responsibility for the documented results are considered essential requirements for graduate degrees and entrance into professional careers.

Information about the College of Engineering and Applied Sciences can be accessed via the World Wide Web at www.eas.asu.edu. The individual department and research program Web pages may also be accessed through this main address.

ORGANIZATION

The College of Engineering and Applied Sciences is organized as follows:

Del E. Webb School of Construction

School of Engineering

Department of Chemical and Materials Engineering
 Department of Civil and Environmental Engineering
 Department of Computer Science and Engineering
 Department of Electrical Engineering
 Department of Industrial Engineering
 Department of Mechanical and Aerospace Engineering
 Harrington Department of Bioengineering

Each academic unit, headed by a chair or director, offers various undergraduate and graduate degree programs. Faculty from these academic units participate in the research programs offered through the college research centers as well as individual laboratories and facilities. Drawing on the interests, strengths, and resources of academic units in the College of Engineering and Applied Sciences and other schools and colleges within the university, interdisciplinary

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research centers coordinate research, sponsor conferences and continuing education courses, and serve as liaison between the academic and industrial or technical communities.

ADMISSION REQUIREMENTS

Applicants must meet the general admission requirements established by the Graduate College. Additional supporting materials may be required by individual academic units. These materials may include test scores from the Graduate Record Examination, letters of recommendation, and statements of educational and professional goals. International applicants whose native language is not English must also submit Test of English as a Foreign Language (TOEFL) scores. See the requirements listed under each major in this catalog for specific TOEFL information.

General information on admission, expenses, and other such topics may be obtained from the Office of the Associate Dean for Academic Affairs via the college's Web site at www.eas.asu.edu. Specific questions on a program should be addressed to the academic unit.

GRADUATE PROGRAMS

Through the Graduate College, faculty in the College of Engineering and Applied Sciences offer various graduate programs leading to the M.S., Master of Science in Engineering, Master of Engineering, Master of Computer Science, and Ph.D.

The college is committed to becoming a nationally prominent center for graduate research. Faculty members conduct research on government or industry-sponsored programs in such areas as aerodynamics, biomedical engineering, biotechnology, computer design, computer-integrated manufacturing, construction management, environmental fluid dynamics, innovative engineering education, microelectronics manufacturing, power systems, semiconductor materials and devices, signal processing, solar energy, solid-state electronic devices, structural dynamics, telecommunications, thermosciences, and transportation infrastructure. The research activities of the academic units within the college are complemented and supported by the work of centers for research and development.

Research in the Center for Low Power Electronics focuses on the following technical areas:

1. basic materials, alternative materials, and their fabrication;
2. device design optimization;
3. design of digital, analog, and hybrid low power circuits; and
4. power-based physical design for single and multichip VLSI systems.

The college's Telecommunications Research Center focuses, plans, and promotes the research activities of the faculty with interests in antennas, propagation, and scattering; microwave circuits, devices, and measurements; optical communications; signal processing; and switching and data communications. The center conducts research, develops technologies, and provides educational programs. Industrial and multidisciplinary programs are encouraged. The center

operates modern research laboratories, including an excellent, spacious electromagnetic anechoic chamber.

The Institute for Manufacturing Enterprise Systems was established to broaden the scope of manufacturing research in the university to include research at the interface between the W. P. Carey School of Business and the College of Engineering and Applied Sciences as well as research in manufacturing processes. The institute has codirectors from both colleges and also enjoys active industry involvement.

The Center for Research on Education in Science, Mathematics, Engineering, and Technology (CRESMET) is a collaborative effort between CEAS, the College of Liberal Arts and Sciences, and the College of Education. The mission of this center is to research, develop, and assess educational theories, curricula, and administrative policies that impact science, mathematics, engineering, and technology education, and to encourage and support wide-scale sharing and implementation of effective approaches to producing a more scientifically and technologically literate populace, and more capable science, math, engineering, and technology graduates. Partnership-building with individuals, programs, and organizations throughout the K-12 education system is an important role for this center, which is ideally positioned to exploit the synergism that can result from linking all educational levels in these disciplines together to foster improvements.

The Center for Professional Development coordinates continuing education services for the local, national, and international technical community, sponsoring conferences, seminars, institutes, and short courses for professionals in the rapidly changing fields of science and technology. The center also coordinates distance-learning and media-delivered programs via television, satellite, and Web connections.

The College of Engineering and Applied Sciences serves the high technology community through the Interactive Instructional Television Program. The system allows employees of participating companies to attend graduate-level courses, special interest seminars, and video teleconferences without leaving their place of employment. In cooperation with the National Technological University, the college also provides instruction via satellite.

The College of Engineering and Applied Sciences and the industrial and business communities of Arizona interact regularly through the Dean's Advisory Council. The council's primary purpose is to assist the college in its threefold mission:

1. to provide undergraduate and graduate students with a variety of high-quality educational opportunities that will serve their professional interests into the 21st century,
2. to enhance the economic well-being of Arizona and the nation, and
3. to meet the rapidly expanding need for research and educational support of the high-technology industry of Arizona.

The Engineering Excellence 2000 program sponsored by the college and the Arizona industrial and business communities has been instrumental in dramatically increasing state, federal, and private funding of undergraduate and graduate

College of Engineering and Applied Sciences Graduate Degrees and Majors

Major	Degree	Concentration	Administered By
Del E. Webb School of Construction			
Construction	M.S.	Construction science, facilities, management	Del E. Webb School of Construction
School of Engineering			
Aerospace Engineering	M.S., M.S.E., Ph.D.	—	Department of Mechanical and Aerospace Engineering
Bioengineering	M.S., Ph.D.	—	Harrington Department of Bioengineering
Chemical Engineering	M.S., M.S.E., Ph.D.	—	Department of Chemical and Materials Engineering
Civil Engineering	M.S., M.S.E., Ph.D.	—	Department of Civil and Environmental Engineering
Computer Science	M.C.S., M.S., Ph.D.	—	Department of Computer Science and Engineering
Electrical Engineering	M.S., M.S.E., Ph.D.	—	Department of Electrical Engineering
Engineering	M.E. ¹	—	School of Engineering
Engineering Science	M.S., M.S.E., Ph.D.	—	School of Engineering
Industrial Engineering	M.S., M.S.E., Ph.D.	—	Department of Industrial Engineering
Materials Engineering	M.S., M.S.E.	—	Department of Chemical and Materials Engineering
Materials Science	M.S. ²	—	Committee on the Science and Engineering of Materials
Mechanical Engineering	M.S., M.S.E., Ph.D.	—	Department of Mechanical and Aerospace Engineering
Science and Engineering of Materials	Ph.D. ²	High-resolution nanostructure analysis, solid-state device materials design	Committee on the Science and Engineering of Materials

¹ This collaborative program is offered by the three state universities.

² This program is administered by the Graduate College.

instruction and the college’s research programs. Currently, the School of Engineering, which houses the college’s seven engineering departments, is emphasizing research in the areas of electronics/materials, manufacturing, communications and information systems, environmental engineering, biotechnology, and software engineering. The college’s Del E. Webb School of Construction enjoys great community support for its active graduate program in construction sciences and construction and facilities management.

Arizona’s three state universities—Arizona State University, Northern Arizona University, and the University of Arizona—are cooperating in the offering of a new tri-university degree program: the Master of Engineering. The Master of Engineering is a graduate degree program that is intended to meet the educational needs of Arizona’s practicing engineers. With input from industry professionals, the three universities expect to develop courses that address the enhancement and development of skills, knowledge, and understanding that are critical to today’s practicing engineer. These courses will be offered through a variety of distance-delivery methods and in flexible formats. Students enrolled in the program will be able to take advantage of course offerings at any of the three universities. These offerings reflect the diversity of strengths across the state. The Master of Engineering offers the practicing engineer the

opportunity to design, in conjunction with an advisory committee, a program of study that can reflect the increasingly interdisciplinary nature of engineering practice.

For more information on this degree program, see “Master of Engineering—M.E.,” page 197, visit the program’s Web site at triuniv.engr.arizona.edu, contact the College of Engineering and Applied Sciences at 480/965-1726, or send e-mail to m.eng@asu.edu.

See the “College of Engineering and Applied Sciences Graduate Degrees and Majors” table, on this page.

COLLEGE FACILITIES

Numerous well-equipped laboratories, extensive library holdings, and widely available computer services encourage the best in research and graduate training. Laboratories include facilities for environmental fluid dynamics, interactive nonvisualization via scanning probe microscopy, materials and surface characterization, mechanical testing, molecular beam epitaxy, neuromechanical control, rapid manufacturing processes, transmission microscopy, and surface research, to name only a few of the diverse capabilities of the college’s physical resources. Supporting the work of researchers, a well-equipped and well-staffed machine and structures fabrication shop makes special-purpose equipment for student and faculty projects. For more information

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about laboratories, consult the descriptions of individual programs and centers for research in this catalog.

The College of Engineering and Applied Sciences offers extensive computing facilities to its faculty and graduate students. The college centrally maintains computing resources for general engineering use, including a large Sun SPARCcenter 2000 superserver, Hewlett Packard 9000 superserver, and an IBM Netfinity Quad M7000 NT Server. Also available are specialty computers for World Wide Web services, electronic mail, Internet collaboration, and special applications. Distributed throughout the college are several thousands of networked UNIX workstations and PCs accessing UNIX or NT servers available for research and instruction. UNIX workstations are provided by manufacturers such as Sun Microsystems, Hewlett Packard, Silicon Graphics, and Digital Equipment Corporation. All college computing resources are interconnected via the Internet standard TCP/IP on 10Mb or 100Mb dedicated ethernet.

ACADEMIC STANDARDS

Retention. A student who has been admitted to a graduate program of study in the College of Engineering and Applied Sciences, on either a regular or provisional basis, must maintain a 3.00 or higher GPA in all work taken for graduate credit as well as an overall 3.00 GPA in all studies at ASU.

A student is placed on academic probation if

1. the student's GPA falls below 3.00 in the approved program of study;
2. the student's overall GPA for all postbaccalaureate courses taken at ASU falls below 3.00;
3. the student receives a "D" or "E" in a required deficiency or in a course at the 400 level or above; or
4. for reasons other than above, the student fails to make satisfactory progress toward a degree.

A student is recommended for withdrawal from a graduate program if

1. the student is on academic probation because his or her GPA has fallen below 3.00 in the approved program of study or for all postbaccalaureate courses taken at ASU and fails to bring the GPA to 3.00 or above by the time the next nine semester hours are completed;
2. the student receives a "D" or lower grade while on academic probation for any reason;
3. the student fails to obtain at least a 3.00 GPA in all courses cited as deficiencies upon admission to a graduate program;
4. the student fails to meet any other conditions imposed as part of the probation; or
5. for reasons other than above, the student fails to make satisfactory progress toward a degree.

A student may appeal any action concerning academic probation and withdrawal by petitioning the graduate affairs committee within the student's academic unit.

The Katherine K. Herberger College of Fine Arts

herbergercollege.asu.edu

J. Robert Wills, Ph.D., Dean

PURPOSE

The Katherine K. Herberger College of Fine Arts at ASU offers preprofessional and professional education in the arts disciplines and opportunities for nonmajors to become culturally literate through participation and involvement in the creative and performing arts.

At the graduate level, the college provides students the opportunity to participate with faculty mentors in research, performance and performance practices, and other creative activities.

As the largest and most diverse fine arts academic unit in the Southwest, and one of the largest in North America, the college has an implicit responsibility to maintain quality and leadership in all aspects of its activities. Through its programs in art, dance, music, and theatre, the college reflects a wide range of challenges facing the artist and scholar in the 21st century.

ORGANIZATION

The college houses the School of Art, the Department of Dance, the School of Music, the Department of Theatre, the ASU Art Museum, and the Institute for Studies in the Arts. An average of 2,000 students per semester enroll as majors in various degree programs offered through these units. Approximately one third of these are graduate students.

GRADUATE PROGRAMS

Faculty in the School of Art, Department of Dance, School of Music, and Department of Theatre offer both research and professional degrees through the Graduate College: the M.A., Master of Fine Arts, Master of Music, Doctor of Musical Arts, and Ph.D. degrees. A full range of majors and concentrations is available.

See the "Herberger College of Fine Arts Graduate Degrees and Majors" table, page 71.

ADMISSION REQUIREMENTS

Admission requirements vary according to degree programs. However, applicants must first meet all admission requirements of the Graduate College. Most programs require a bachelor's degree with a major in the selected area; many of them also require an audition. See the specific degree program for pertinent admission requirements.

Herberger College of Fine Arts Graduate Degrees and Majors

Major	Degree	Concentration	Administered By
Art	M.A.	Art education, art history	School of Art
	M.F.A.	Ceramics, drawing, fibers, intermedia, metals, painting, photographic studies, photography, printmaking, sculpture, wood	School of Art
Composition	M.M.	—	School of Music
Creative Writing	M.F.A. ¹	—	Creative Writing Committee
Curriculum and Instruction	Ph.D. ²	Art education	School of Art
Dance	M.F.A.	—	Department of Dance
History and Theory of Art ³	Ph.D.	—	School of Art
Music	M.A.	Ethnomusicology, music history and literature, music theory	School of Music
	D.M.A.	Conducting, music composition, music education, performance	School of Music
Music Education	M.M.	Choral music, general music, instrumental music, jazz studies	School of Music
Performance	M.M.	Music theatre/opera musical direction, music theatre/opera performance, performance, performance pedagogy, piano accompanying	School of Music
Theatre	M.A.	—	Department of Theatre
	M.F.A.	Performance, scenography, theatre for youth	Department of Theatre
	Ph.D.	Theatre for youth	Department of Theatre

¹ This program is administered by the Graduate College.

² This program is administered in collaboration with the College of Education and the Graduate College.

³ This major is jointly offered with the University of Arizona.

SPECIAL PROGRAMS

Together with faculty, visiting scholars, and artists-in-residence, graduate students in all fields of the college participate in dynamic, innovative programs. The creative energy that infuses the visual and performing arts finds expression in research and study.

The School of Art offers scholarly programs in the history, theory, and teaching of art, and highly respected studio programs in ceramics, drawing/painting, fibers, intermedia, metals, photography, printmaking, sculpture, and wood. The accomplished faculty and visiting artists/scholars create an excellent learning environment for innovation and collaboration. Harry Wood and Northlight galleries, studios and workshops, and three computer and/or video labs support this outstanding program.

In addition, the School of Art has three traveling research fellowships that allow students to study or conduct research abroad. The Nathan Cummings Travel Fellowship is for M.F.A. students and the Anthony Gully Travel Fellowship and the Rabiner Memorial Fellowship are for graduate History and Theory of Art students.

Recognized as one of the top programs in the country, the Department of Dance emphasizes the choreography, performance, and theory of modern dance. Nationally prominent faculty and visiting artists create repertory for dance majors and for the Dance Arizona Repertory Theatre (DART), a student touring outreach company. An ambitious performance program offers to the public several concerts each year with additional works created and performed by graduate and undergraduate students. Students work closely with

major artists and companies who visit campus annually, and with researchers in the areas of dance science, dance in relation to technology, dance music composition, labanotation, and sound and video production. ASU students and faculty have consistently taken top honors at the regional and national festivals of the American College Dance Festival Association.

As the research center for the college, the Institute for Studies in the Arts serves as a laboratory for the development and funding of creative ideas and for the exploration of new tools and technologies for artistic expression, a network for communication among creative scholars both within and outside the arts, and a resource base for the documentation, evaluation, and dissemination of research in the arts. Through technical and monetary support, the institute sponsors a wide variety of projects that address its mission of experimentation and innovation.

Faculty in the School of Music include a wide range of performers, teachers, conductors, composers, and scholars, whose knowledge and guidance support the training of students in the Doctor of Musical Arts and master's degree programs. Individuals who hold graduate degrees from ASU's School of Music hold prestigious performing and university teaching positions throughout the nation. The graduate programs are indeed comprehensive and provide for wide and diverse opportunities in performance, course work, and research.

Three concentrations are available in the M.F.A. in Theatre program: performance, scenography, and theatre for youth. The concentration in performance challenges

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performing artists to reinvigorate the classics, develop new works, explore new theatrical forms, and discover changing relationships between art and technology.

Students in the scenography program are actively involved in all aspects of design and technology for mainstage and studio productions and receive regional and national awards on a regular basis for their work.

The Department of Theatre takes special pride in its nationally and internationally acclaimed theatre for youth program, which provides comprehensive graduate training and attracts students, scholars, and artists from around the world. Graduate students are challenged to excel in every aspect of theatrical training. They are offered acting, directing, and other production opportunities for mainstage, studio, and touring shows, as well as research and teaching opportunities on and off campus. The program has developed Hayden Library's Child Drama Collection, which includes rare books, plays, memorabilia, and personal and national association archives. It is the most complete and comprehensive child drama collection in the English-speaking world. The Ph.D. in Theatre program also offers a concentration in theatre for youth.

The M.F.A. in Creative Writing encourages graduate students to work closely with writers of drama, fiction, and poetry, and with directors and producers from the Departments of English and Theatre. This interdisciplinary program, involving the artistic, research, and teaching interests of faculty in these departments, offers students a unique opportunity to tailor a course of study to fit individual needs, talents, and goals.

COLLEGE FACILITIES

The arts programs are housed in the following buildings: Art Building; Dixie Gammage Hall; Physical Education Building East; Gammage Center for the Performing Arts; Matthews Center; Matthews Hall; the J. Russell and Bonita Nelson Fine Arts Center, which includes the ASU Art Museum; the 496-seat Paul V. Galvin Playhouse; six theatre studios; a 7,000-square-foot Experimental Dance Lab; a dance studio theatre; and a video lab. The Music Building and expansion wing house four performance halls ranging in size from the 125-seat Recital Hall to the 500-seat Music Theatre and the 350-seat Katzin Concert Hall, which is used primarily for solo and chamber music recitals. The Katzin Concert Hall contains a nine-foot Hamburg Concert Steinway piano. The new 175-seat Organ Hall was designed to house the Paul Fritts Tracker Organ, an instrument reflecting the aesthetics and style of North German organ building in the 17th century. The Theatre Department also stages productions in the renovated Lyceum Theatre and Prism Theatre. Many of these facilities are equipped with studios and laboratories, where needed.

The ASU Art Museum's collections are housed in a large complex of galleries and art study rooms in two locations: the Nelson Fine Arts Center and the second floor of the Matthews Center. The Oliver B. James Collection of American Art ranges from the early 18th century to the contemporary and includes major works by Stuart, Ryder, Homer, and the Ash Can School painters. Master works by great print-makers such as Durer, Rembrandt, Whistler, and Hogarth

are often featured in special exhibitions selected from the university's extensive print collection.

The gallery devoted to Latin American art features folk art as well as paintings by celebrated 20th-century artists Rivera, Siquerios, and Tamayo. The museum also displays many fine examples of 19th- and 20th-century crafts, paintings, and sculpture.

The contemporary art holdings include works by Vernon Fisher, Leon Golub, Sue Coe, Luis Jimenez, and Robert Colescott. Exhibitions curated by the museum emphasize contemporary art and new media, crafts, and Mexican art.

All units have developed computer facilities for graduate student training. Also refer to "Computing Facilities and Services," page 30.

ADVISING

Advising is handled as a decentralized activity within the college. To offer personalized attention, each academic unit establishes its own graduate advising procedures. Students are encouraged to make appointments through the central office of their major discipline.

ACCREDITATION

While all of the arts programs in the college meet or exceed standards established by various arts accrediting agencies, the School of Music holds formal memberships in the National Association of Schools of Music.

College of Law

www.law.asu.edu

Patricia D. White, J.D., Dean

PURPOSE

The prime function of the College of Law is to train men and women for the practicing legal profession and related professional assignments. In addition, the college has the responsibility to contribute to the quality of justice administered in society.

ORGANIZATION

Law Building and Law Library

The John S. Armstrong Law Building is located near other colleges on the university's main campus. The Law Building provides every modern facility for legal education and has been described by experts involved in the planning of law buildings as setting a new standard in functional design.

The award-winning John J. Ross-William C. Blakley Law Library, named in memory of two prominent Phoenix attorneys, is one of the finest law libraries in the Southwest. The library houses a collection of more than 351,000 volumes and microform volume equivalents. The collection includes a broad selection of Anglo-American case reports

and statutes as well as legal treatises, periodicals, encyclopedias, digests, citators, and administrative materials. The collection also includes a growing selection of special materials dealing with international law, Indian law, Mexican law, and law and technology.

The library, housed in a dramatic and functional building that opened in August 1993, is also a selective U.S. government depository. The building provides accessible shelving for the expanding collections and comfortable study space at carrels, tables, and lounge seating located throughout the library. Additionally, the law library has a 30-station computer lab as well as LEXIS and WESTLAW rooms that contain 10 stations each, 27 meeting and study rooms, a microforms facility, and a classroom.

Students also have ready access to the other campus libraries, including the Charles Trumbell Hayden Library, the Daniel E. Noble Science and Engineering Library, the Architecture and Environmental Design Library, and the Music Library. The collections maintained in all university libraries comprise more than 3 million volumes.

GRADUATE PROGRAMS

Juris Doctor Degree

The College of Law offers a three-year program of professional study at the graduate level leading to the degree of Juris Doctor (J.D.).

Concurrent Degree Programs

Law students wishing to pursue a joint degree program at ASU must have a joint degree application and program of study approved by the associate dean of the College of Law before pursuing the joint degree.

Certificate Programs

See “Indian Legal Program,” on this page, for information about the Certificate in Indian Law. For information about the Certificate in Law, Science, and Technology, contact the college.

SPECIAL PROGRAMS

Center for the Study of Law, Science, and Technology

The ASU Center for the Study of Law, Science, and Technology is a multidisciplinary research center founded by the Arizona Board of Regents in 1984. The center publishes research studies, sponsors seminars and symposia, and houses visiting scholars and teachers. Through these programs, the center seeks to contribute to (1) the formulation and improvement of law and public policy affecting science and technology; and (2) the wise application of science and technology in the legal system.

The College of Law offers a substantial number of courses in the law, science, and technology area, including bioethics law and psychiatry, environmental law, health care law, intellectual property, land use regulation, law and evolutionary biology, law and medicine, law and social science, mass communication, natural resources law, patent law, regulatory problems in law, science and technology, and water law. Each semester, the center publishes a student guide to other less obvious courses that contain science and technology issues. In recent semesters, this guide has listed courses

in AIDS and the law, commercial law, employment law, law and the handicapped, antitrust, statistical proof in employment discrimination litigation, and several courses offered by other departments on campus available for registration by law students. In addition to regular course offerings, students can arrange independent studies with supervising faculty on topics of special interest to them. The center also invites guest speakers from legal or scientific fields to visit with interested law students, generally during the noon hour.

In cooperation with the American Bar Association Section on Science and Technology and under the leadership of a faculty editor, second- and third-year students edit *Jurimetrics: The Journal of Law, Science and Technology*. Student editors both edit submitted works and write original articles for publication in the journal.

Clinical Program

The College of Law’s Clinical Program is a rigorous in-house program that provides third-year students, under the close supervision of an ASU faculty member, the opportunity to represent clients in court. Four live-client clinics—the Civil Practice Clinic, the Criminal Practice Clinic, the Public Defender Clinic, and the Mediation Clinic—provide students with an opportunity to choose from civil or criminal representation or to serve as mediators in disputes that are resolved outside the court system.

The Civil Practice Clinic operates as a functioning law firm within the college, while Criminal Practice and Public Defender Clinic students work in offices located within agencies or courthouses. Second-year students are offered “simulation-based” courses in Lawyering Theory and Practice in preparation for enrollment in a live-client clinic. Other simulation courses include Trial Advocacy, Pre-Trial Practice, and Negotiations.

Indian Legal Program

The College of Law offers an Indian Legal Program intended to serve tribal courts and governments by providing information on legal issues. The program also provides education and general scholarship on Indian law. Through a Certificate in Indian Law, the college provides its students with a quality legal education and an opportunity to gain specific knowledge and expertise in Indian law.

Students at the College of Law have the opportunity to participate in all phases of the Indian Legal Program and gain an in-depth understanding of the legal issues affecting Indian tribes and peoples. Courses on Federal Indian law and seminars on advanced Indian law topics such as American Indian cultural resources protection, tribal law, economic development, and tribal environmental law are part of the curriculum. Students also have the opportunity to participate in internships with local tribal courts, the Native American Rights Fund, the U.S. Department of the Interior, or the Senate Committee on Indian Affairs in Washington, D.C. This variety of academic and work experience provides the students with an outstanding legal education and a firm grounding in both the theoretical and practical aspects of Indian law.

Law Journal

The College of Law publishes a professional law review, the *Arizona State Law Journal*, edited by students of the

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second- and third-year classes. Membership on the law journal is determined by grade performance in the first year and by submitting written work in a writing competition. Participation on law review is hard but rewarding work. For those eligible, the review provides one of the finest avenues for legal education thus far developed. Its work contributes to the student's intellectual advancement, to the development of law and the legal profession, and to the stature of the law school.

ADMISSION REQUIREMENTS

First-year students are admitted for only the fall semester. The formal requirements for college admission are (1) an undergraduate degree from an accredited four-year college or university and (2) a score on the Law School Admission Test (LSAT), administered by Law Services.

Each applicant for admission to the Juris Doctor (J.D.) program must have earned an undergraduate degree from an accredited four-year college or university (B.A., B.S., or other equivalent). The College of Law Admissions Office considers an applicant's file complete only if it includes each of the following:

1. a completed Application for Admission form;
2. a completed Arizona residency information form if claiming Arizona residency;
3. a \$45 application fee;
4. a personal statement that does not exceed three double-spaced typed pages;
5. employment history or résumé from high school graduation until present; and
6. a Law School Data Assembly Service (LSDAS) report, which must be from the current application year, with all transcripts, two letters of recommendation, and the LSAT score(s) from Law Services.

To be assured consideration, all application materials must be received or postmarked by February 15.

More detailed information about the course of study, admission practices, expenses, and financial assistance can be found in the *Bulletin of the College of Law*. To request the bulletin or application forms, call 480/965-7207, or write

ADMISSIONS OFFICE
COLLEGE OF LAW
ARIZONA STATE UNIVERSITY
PO BOX 877906
TEMPE AZ 85287-7906

For general information about the College of Law, call 480/965-1474, or access the college's Web site at www.law.asu.edu.

COURSE OF STUDY

The program of study in the College of Law is designed for full-time students. In the first year of the three-year program, the course of study is prescribed and incorporates the time-proven techniques of legal education. Through case methods, problem methods, moot court experience, and

other techniques, the first year gives students an intensive exposure to basic legal processes.

As part of the program, first-year students are assigned to small sections. In the Legal Research and Writing program, first-year students prepare legal briefs and memoranda and receive feedback through the use of practice examinations. The program focuses on the development of writing and organizational skills necessary for success in law school and in the practice of law. The second and third years cover a wide range of courses varying in format as well as subject matter, allowing students to pursue both the basic subjects of law study and more specialized interests. By offering great freedom in the selection of subjects, the educational experience of the second and third years sharply contrasts with the curriculum of the first year. In addition, the college offers a number of faculty-supervised clinical education programs and a program of supervised externships.

Retention Standards. To be eligible to continue in the College of Law, students must maintain a cumulative weighted GPA of 70 or higher at the end of each semester or summer session. Any student who fails to achieve a 70 GPA in any one semester, regardless of the cumulative GPA, is automatically placed on probation. Continuation of enrollment by probationary students is based upon such terms and conditions as the college may impose.

A student whose cumulative GPA falls below the required level or whose semester GPA is less than 70 in two consecutive semesters is dismissed but may apply to the Office of the Dean for readmission. The Office of the Dean refers the application to a faculty Committee on Readmission. In cases where the GPA deficiency is slight and evidence of extenuating circumstances is convincing, readmission may be granted on a probationary status after a review of the reasons contributing to unsatisfactory performance and a finding that there is a substantial prospect for future acceptable academic performance. Continuation in school thereafter may be conditioned on achieving a level of performance higher than the overall 70 GPA. Further detailed information concerning the college's retention standards can be found in the *Bulletin of the College of Law*.

Honor Code. The legal profession, a self-regulating association, depends on the integrity, honor, and personal morality of each member. Similarly, the integrity and value of an ASU College of Law degree depends on a reputation for fair competition. The college's *Honor Code* is intended as a measure to preserve the integrity of the school's diploma and to create an arena in which students can compete fairly and confidently. Copies of the *Honor Code* are available from the college's Student Services Office.

ADVISING

Preadmission information, advising, and continued support for the J.D. is provided by the College of Law Admissions Office, 480/965-1474.

ACCREDITATION

The college is fully accredited by the American Bar Association and is a member of the Association of American Law Schools.

College of Liberal Arts and Sciences

www.asu.edu/clas

David A. Young, Ph.D., Dean

PURPOSE

The graduate programs in the College of Liberal Arts and Sciences are characterized by both a diversity of disciplines and a commonality of purpose. The disciplinary diversity of the college is broad by intent, embracing those branches of learning most central to the foundations of society in the humanities and the sciences. Unity of purpose is achieved through a common commitment to intellectual integrity, to research, and to the preservation of freedom of academic inquiry, as well as through informal exchanges and cross-disciplinary centers.

The College of Liberal Arts and Sciences has active research programs in all units offering advanced degrees. In recent years, the rapid addition of excellent faculty has enhanced the cadre of senior scholars and scientists with whom graduate students work.

ORGANIZATION

The College of Liberal Arts and Sciences, which offers graduate study in the humanities, the mathematical and the natural sciences, and the social sciences, brings together highly qualified faculty and advanced students to share learning and discovery in 20 academic units and in a number of interdisciplinary centers. In lectures and seminars, in laboratories and libraries, in creative endeavors, field experiences, and research projects, faculty and students cooperate in preserving, evaluating, and expanding knowledge.

GRADUATE PROGRAMS

In cooperation with the Graduate College, faculty affiliated with various departments and units within the College of Liberal Arts and Sciences offer three research-oriented degrees: the M.A., the M.S., and the Ph.D. In addition, four professional degrees are offered: the Master of Natural Science, the Master of Teaching English as a Second Language, the Master of Physical Education, and the Master of Fine Arts, an interdisciplinary creative writing program offered in cooperation with the Herberger College of Fine Arts. The interdisciplinary master's program in Humanities draws faculty expertise from the Departments of Anthropology, Dance, English, History, Languages and Literatures, Philosophy, and Religious Studies and the School of Art. Interdisciplinary programs leading to the Ph.D. degree are offered in Exercise Science, Molecular and Cellular Biology, Science and Engineering of Materials, and Speech and Hearing Science. Many departments within the college participate in the Master of Education, Doctor of Education,

and Doctor of Philosophy degrees offered and administered through the College of Education. Members of the Department of Mathematics and Statistics faculty participate in the interdisciplinary M.S. degree in Statistics (with W. P. Carey School of Business faculty); members of the Department of Chemistry and Biochemistry and the School of Life Sciences participate in the interdisciplinary M.S. and Ph.D. in Molecular and Cellular Biology; members of the faculty in the Departments of Anthropology, History, Languages and Literatures, Philosophy, Political Science, Psychology, Religious Studies, and Sociology participate in the interdisciplinary Ph.D. in Justice Studies program; members of the Departments of Geography, Political Science, and Sociology faculty contribute to the interdisciplinary Doctor of Public Administration program; and members of the Departments of English, Family and Human Development, Sociology, and Speech and Hearing Science faculty participate in the interdisciplinary Ph.D. degree in Communication.

One of the unique features of an interdisciplinary program is that it draws upon faculty research and teaching interests from a number of academic units; thus a student may tailor a course of study to fit individual needs and goals.

See the "College of Liberal Arts and Sciences Graduate Degrees and Majors" table, page 76.

ADMISSION REQUIREMENTS

Applicants to graduate programs within the College of Liberal Arts and Sciences must meet general requirements for admission established by the Graduate College (see "Admission to the Graduate College," page 84). In addition, academic units usually require test scores from the Graduate Record Examination and Miller Analogies Test, letters of recommendation, and a statement of purpose. Consult the individual degree programs for particular requirements. International applicants must also submit Test of English as a Foreign Language (TOEFL) scores and are advised to submit application materials well in advance of deadlines.

SPECIAL PROGRAMS

The college continually strives to provide students with new program areas, many of which are interdisciplinary in content. There is a special strength, for example, in planetary geology, as well as in more traditional geological sub-disciplines; in geochemistry, as well as in biochemistry and solid-state and materials science; and in magnetic properties of materials, as well as nuclear physics and surface physics. In psychology, traditional social, developmental and clinical research is augmented by a new interest in preventive mental health. Flexibility and forward-looking program development pervade all college programs. The interdisciplinary degree in Exercise Science is internationally recognized. The graduate Creative Writing program brings talented students together with distinguished poets, playwrights, and novelists. The Teaching English as a Second Language program attracts students from all over the world. The Southwest environment has favorably affected program development in several ways, ranging from research activities in water resources, archaeology, and

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College of Liberal Arts and Sciences Graduate Degrees and Majors

Major	Degree	Concentration	Administered By
Anthropology	M.A. ¹	Archaeology, bioarchaeology, linguistics, museum studies, physical anthropology, social-cultural anthropology	Department of Anthropology
	Ph.D.	Archaeology, physical anthropology, social-cultural anthropology	Department of Anthropology
Asian Languages and Civilizations—Chinese/Japanese	M.A.	—	Department of Languages and Literatures
Biology ²	M.S., Ph.D.	Ecology	School of Life Sciences
Chemistry	M.S., Ph.D.	Analytical chemistry, biochemistry, geochemistry, inorganic chemistry, organic chemistry, physical chemistry, solid-state chemistry	Department of Chemistry and Biochemistry
Communication Disorders	M.S.	—	Department of Speech and Hearing Science
Computational Biosciences	M.S.	—	College of Liberal Arts and Sciences
Creative Writing ³	M.F.A.	—	Creative Writing Committee
English	M.A.	Comparative literature, English linguistics, literature and language, rhetoric and composition	Department of English
	Ph.D.	Literature, rhetoric/composition and linguistics	Department of English
Exercise Science ³	Ph.D.	Biomechanics, motor behavior/sport psychology, physiology of exercise	Committee on Exercise Science
Family and Human Development	M.S.	Family studies	Department of Family and Human Development
Family Science ²	Ph.D.	Marriage and family therapy	Department of Family and Human Development
French	M.A.	Comparative literature, linguistics, literature	Department of Languages and Literatures
Geography	M.A., Ph.D.	—	Department of Geography
Geological Sciences	M.S., Ph.D.	—	Department of Geological Sciences
German	M.A.	Comparative literature, language and culture, literature	Department of Languages and Literatures
History	M.A.	Asian history, British history, European history, Latin American history, public history, U.S. history, U.S. Western history	Department of History
	Ph.D.	Asian history, British history, European history, Latin American history, U.S. history	Department of History
Humanities	M.A.	—	Graduate Committee on Humanities
Kinesiology	M.S.	—	Department of Kinesiology
Materials Science ³	M.S.	—	Committee on the Science and Engineering of Materials
Mathematics	M.A., Ph.D.	—	Department of Mathematics and Statistics
Microbiology	M.S., Ph.D.	—	School of Life Sciences
Molecular and Cellular Biology	M.S., Ph.D.	—	Interdisciplinary Committee on Molecular and Cellular Biology

¹ Graduate students in the Department of Anthropology and the School of Justice Studies are able to receive a concurrent M.A. degree in Anthropology and M.S. degree in Justice Studies.

² This major has formalized concentration(s); other areas of study are available.

³ This program is administered by the Graduate College.

College of Liberal Arts and Sciences Graduate Degrees and Majors (continued)

Major	Degree	Concentration	Administered By
Natural Science	M.N.S.	Biology Chemistry Geological sciences Mathematics Microbiology Physics Plant biology	School of Life Sciences Department of Chemistry and Biochemistry Department of Geological Sciences Department of Mathematics and Statistics School of Life Sciences Department of Physics and Astronomy School of Life Sciences
Philosophy	M.A., Ph.D.	—	Department of Philosophy
Physical Education	M.P.E.	—	Department of Kinesiology
Physics	M.S., Ph.D.	—	Department of Physics and Astronomy
Plant Biology ²	M.S., Ph.D.	Ecology, photosynthesis	School of Life Sciences
Political Science	M.A., Ph.D.	American politics, comparative poli- tics, international relations, political theory	Department of Political Science
Psychology	Ph.D.	Behavioral neuroscience, clinical psychology, cognitive/behavioral systems, developmental psychology, quantitative research methods, social psychology	Department of Psychology
Religious Studies	M.A., Ph.D.	—	Department of Religious Studies
Science and Engineering of Materials	Ph.D. ³	High-resolution nanostructure analysis, solid-state device materials design	Committee on the Science and Engineering of Materials
Sociology	M.A., Ph.D.	—	Department of Sociology
Spanish	M.A. Ph.D.	Comparative literature, language and culture, linguistics, literature Cultural studies, literature	Department of Languages and Literatures Department of Languages and Literatures
Speech and Hearing Science ³	Ph.D.	Developmental neurolinguistic disor- ders, neuroauditory processes, neurogerontologic communication disorders	Committee on Speech and Hearing Science
Statistics ³	M.S.	—	Committee on Statistics
Teaching English as a Second Language	M.TESL	—	Department of English

¹ Graduate students in the Department of Anthropology and the School of Justice Studies are able to receive a concurrent M.A. degree in Anthropology and M.S. degree in Justice Studies.

² This major has formalized concentration(s); other areas of study are available.

³ This program is administered by the Graduate College.

fluvial geomorphology to distinguished programs in His-
panic language, literature, culture, and history.

In addition to traditional and innovative programs within
departments, there are multidisciplinary research centers
within the college, bringing together faculty from various
departments. These include the Centers for Asian Studies,
Exercise and Sport Research, Hispanic Research, Latin
American Studies, Medieval and Renaissance Studies,
Meteorite Studies, and Solid-State Science. Centers sponsor
colloquia, workshops, conferences, and visiting scholars.
They administer international exchange programs, enhance
library holdings and other collections, publish papers and

monographs, maintain archives, and employ graduate
research assistants.

COLLEGE FACILITIES

Strong and nationally funded research facilities, such as
the Facility for High Resolution Electron Microscopy and
the Planetary Geology Laboratory, have attained national
and international prominence. Important research collections
include one of the largest meteorite collections in the world,
the holdings of the anthropology archives and museum, the
space photography collection, the Herbarium, and extensive
library holdings, including important manuscript collections

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in late 19th-century British literature and historical documents of the Southwest.

Graduate students in all disciplines have access to outstanding computer facilities. Mainframe computing for research is provided free of charge. There are substantial microcomputer facilities within individual academic units as well as clusters serving the humanities and social sciences. Minicomputer capabilities are found in various academic units. Also refer to “Computing Facilities and Services,” page 30.

FINANCIAL ASSISTANCE AND SUPPORT

In addition to the usual support for graduate students in the form of stipends and teaching and research assistantships, there is a vigorous funding program to support graduate student research. Not only do graduate students obtain grants from external sources to support their research projects, they also receive support from the college and university to present papers at professional meetings.

ADVISING

Faculty advisors in each academic unit provide guidance to graduate students from admission through completion of the program. Consult the director of graduate studies in the appropriate academic unit. Graduate students must follow an approved program of study filed with the Graduate College. The calendar for enrollment activities is published in the schedule of classes for each semester. Teaching and research assistants, who are required to be enrolled in at least six hours, as well as those enrolled for individual project, thesis, and dissertation credit, are subject to the same calendar deadlines as students enrolled in regularly scheduled classes.

College of Nursing

nursing.asu.edu

Barbara A. Durand, Ed.D., Dean

PURPOSE

The faculty in the College of Nursing acknowledge their responsibility to health care consumers for the preparation of individuals who provide nursing care of professional quality through teaching, research, and service. The purpose of the College of Nursing is to provide educational programs that prepare professional nurses to meet the health care needs of individuals, groups, and communities. To achieve this purpose, the college offers undergraduate, graduate, and continuing and extended education programs. Within the context of a liberal education, the degree programs prepare professional nurses who

1. provide the highest-quality health care to individuals, groups, and communities and who

critically examine and effectively respond to the changing health care needs of society;

2. conduct research and creative activity that strengthen the knowledge base of the discipline, improve theory-based nursing practice, and benefit the health of individuals, groups, and communities; and
3. provide service to the community through a range of nursing activities with diverse populations in a variety of settings.

The continuing and extended education program facilitates lifelong learning by providing opportunities for registered nurses (RNs) to enhance and expand their nursing practice to meet the health care needs of various populations and to further their own professional development.

ORGANIZATION

The College of Nursing recognizes the three major missions of the university, i.e., teaching, research, and service. The responsibility of the associate dean for Graduate Programs and Research is twofold: to oversee the master's program, including the progression of students through the program; and to work with faculty and students to facilitate research activities, such as research development. The associate dean for Undergraduate Programs and Extended Education is responsible for undergraduate degree programs, the progression of students through the program, and extended and continuing education.

The faculty are grouped under two major clinical divisions within nursing: adult health/parent-child nursing and community health/psychosocial nursing systems. Each division has a chair, and each faculty member belongs to a division.

NURSING—M.S.

The graduate curriculum leads to the Master of Science degree in Nursing. The graduate program provides an academic environment that fosters scholarship, critical thinking, and creativity, while preparing nurses for leadership as nurse specialists. The program offers advanced-level courses that can be used as a base for doctoral study and for functional role development in teaching.

Students may select one area of concentration as shown in the “College of Nursing Graduate Degrees and Majors” table, page 79. Within most concentrations, the student may select a Nurse Practitioner or Clinical Specialist role preparation.

Options within the adult health nursing concentration include primary care of chronically ill adults or acute care.

Options within the parent-child nursing concentration include nursing of children and neonatal nursing.

Students may further select a primary or acute focus in nursing of children.

The curriculum also provides clinical nurse practitioner roles, including adult, pediatrics, women's health, psychiatric, and family, as well as clinical nurse specialist in parent-child, adult, community, and mental health.

College of Nursing Graduate Degrees and Majors

Major	Degree	Concentration	Administered By
Nursing	M.S. ¹	Adult health nursing, community health nursing, family health nursing, nursing administration, ² parent-child nursing, psychiatric/mental health nursing, women's health	College of Nursing
Public Health ^{1, 3}	M.P.H.	Community health practice, health administration and policy ⁴	College of Nursing

¹ A two-year M.S./M.P.H. dual degree program is also available.

² Applications are not being accepted at this time.

³ This collaborative program is offered by the three state universities.

⁴ This concentration is administered by the School of Health Administration and Policy.

R.N.-B.S.N.-M.S. PROGRAM

The College of Nursing offers a flexible program leading to a Master of Science degree with a major in Nursing. The program features individually designed plans of study for nurses seeking to become advanced practice nurses as nurse practitioners, clinical nurse specialists, and nurse educators.

Students receive a Bachelor of Science in Nursing (B.S.N.) degree after completing the undergraduate program requirements. Students choose a graduate clinical specialty area from one of the following: adult health nursing, community health nursing, family health, nursing of children, psychiatric/mental health nursing, and women's health.

PUBLIC HEALTH—M.P.H.

The School of Health Administration and Policy and the College of Nursing, at ASU, in conjunction with the University of Arizona and Northern Arizona University, offer courses leading to the Master of Public Health degree. Two concentrations are offered at ASU: (1) Community health practice is coordinated by the College of Nursing, and (2) health administration and policy is coordinated by the School of Health Administration and Policy. For more information, see "Public Health," page 310.

Students can enroll in a two-year dual degree program, earning both the M.S. and the M.P.H.

POST-MASTER'S CERTIFICATE

A post-master's Nurse Practitioner Certificate is available. The certificate program is offered periodically based on community need and college resources.

SPECIAL PROGRAMS AND SERVICES

Continuing Education Programs. This program presents a variety of noncredit offerings on the ASU Main campus, ASU West campus, and off-campus locations. These offerings are designed to assist practicing professional nurses in maintaining and enhancing their competencies, broadening their scientific knowledge base, and further developing their skills in the changing health care environment. Workshops, conferences, institutes, short evening courses, and special programs are offered at times convenient to the working professional. Some offerings are multidisciplinary and are also open to individuals in professions outside of nursing.

Student Services. The Student Services Office in the College of Nursing provides academic advising, general advis-

ing, and referral to university resources. Prospective students with academic questions relating to the College of Nursing should contact the College of Nursing Student Services Office at 480/965-2987.

Scholarships and Financial Assistance. Information about scholarships and loan funds for nursing students may be obtained from the Student Financial Assistance Office, College of Nursing Office of Student Services (call 480/965-2987) or the associate dean for Graduate Programs and Research (call 480/965-3948).

College Council of Nursing Students. The council is a member of ASASU (Associated Students of Arizona State University) and serves as the governing body of all student activities in the college. The College Council of Nursing Students provides for communication, cooperation, and understanding among undergraduate students, graduate students, and faculty, and represents the college in university and nonuniversity affairs.

Graduate Nurse Organization. The Graduate Nurse Organization (GNO) is the coordinating body for nursing students in the graduate program. It provides programs, information, and orientation services for graduate students and complements their academic experiences.

Sigma Theta Tau International. Beta Upsilon Chapter of Sigma Theta Tau was chartered at the ASU College of Nursing in 1976. Membership in Sigma Theta Tau is an honor conferred on students in baccalaureate and graduate programs who have demonstrated outstanding academic and professional achievement.

COLLEGE FACILITIES

Learning experiences with patients and their families are provided under the supervision of qualified faculty with the cooperation of a variety of federal, state, county, and private health agencies. The College of Nursing has contracts with more than 300 agencies in the Phoenix metropolitan area. The college also operates a unique nurse-managed clinic in a community setting, as well as three other community or school-based outreach clinical programs.

Computer Facilities. Computers are available for student use in the Learning Resource Center of the college. Also refer to "Computing Facilities and Services," page 30.

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ADVISING

Students are advised by the Student Services Office before admission to the graduate program. Upon admission, each student is assigned a faculty advisor within the area of concentration. Questions may also be directed to the associate dean for Graduate Programs and Research. For more information, call 480/965-3948.

ACCREDITATION

The baccalaureate and master's programs of the College of Nursing are accredited by the Arizona State Board of Nursing and the National League for Nursing. Preliminary approval of the baccalaureate and master's nursing education programs has been granted by the Commission on Collegiate Nursing Education. The continuing education program is accredited by the Western Regional Accrediting Committee of the American Nurses' Association as a provider of Continuing Education for Nursing. The college is a member of the Council of Member Agencies for the Baccalaureate and Higher Degree Programs of the National League for Nursing, the Western Institute of Nursing, and the American Association of Colleges of Nurses.

College of Public Programs

www.asu.edu/copp

Anne L. Schneider, Ph.D., Dean

PURPOSE

The College of Public Programs offers a wide range of course work, in both on-campus and off-campus settings, to full-time and part-time students. Through the Graduate College, faculty offer various programs leading to graduate degrees. Each academic unit of the College of Public Programs not only assumes responsibility in preparing its own majors, but also provides a variety of service courses for the rest of the university. The college is committed to excellence in teaching, research, and public service. College units work closely with numerous public and private agencies at the national, state, and local levels.

ORGANIZATION

The College of Public Programs consists of American Indian Studies, Asian Pacific American Studies, the Department of Recreation Management and Tourism, the Hugh Downs School of Human Communication, the School of Justice Studies, the School of Public Affairs, the School of Social Work, and the Walter Cronkite School of Journalism and Mass Communication. Each academic unit is administered by a chair or director.

Hugh Downs School of Human Communication. The faculty in the Hugh Downs School of Human Communication advance the understanding of message-related human

behavior in part through the M.A. degree in Communication. The focus of the M.A. degree program is research in one of five areas: intercultural communication, interpersonal communication, organizational communication, performance studies, and rhetoric/public address.

Faculty in the Hugh Downs School of Human Communication participate in offering the interdisciplinary Ph.D. degree in Communication. The program is designed to prepare scholars for research-oriented careers in universities and in the public and private sectors and offers areas of study in critical/cultural studies, information technology, intercultural communication, interpersonal communication, organizational communication, performance studies, relational communication, and rhetoric.

WALTER CRONKITE SCHOOL OF JOURNALISM AND MASS COMMUNICATION

The faculty in the Walter Cronkite School of Journalism and Mass Communication offer the Master of Mass Communication degree (M.M.C.). The M.M.C. is designed to accommodate students who wish to study in the fields of journalism, broadcasting, or public relations. The program provides broader training for professionals employed in the media and for those who wish to enter media fields.

Department of Recreation Management and Tourism.

The faculty in the Department of Recreation Management and Tourism offer a graduate program leading to the M.S. degree in Recreation. The program focuses both on building professional knowledge and developing the ability to analyze topics and issues related to the recreation and tourism fields critically. Students choose between pursuing a more academic, focused thesis option or the more professionally applied nonthesis option. Each student takes graduate core courses in the department and then can pursue individual interests with related course work and a research project.

School of Public Affairs. The faculty in the School of Public Affairs offer a professional graduate program leading to the Master of Public Administration degree. Courses are offered both in the evenings and in an intensive format to fit the scheduling needs of working students. The diversity of the school's program offerings accommodates both preservice students and midcareer public administrators. State and local government internships are available to those with no previous public sector experience. Students work with faculty on the school's active research and publications program, including public policy reports and other community service projects for state and local governments in Arizona.

The school also administers the interdisciplinary Ph.D. in Public Administration program. Faculty of the School of Public Affairs participate in offering this degree program.

School of Justice Studies. The School of Justice Studies provides an interdisciplinary social science perspective for studying law and justice, crime and delinquency, dispute resolution, gender justice, racial and ethnic minorities and the law, and social and economic justice. Its faculty have academic backgrounds in anthropology, criminology, history, law, philosophy, political science, psychology, and sociology.

College of Public Programs Graduate Degrees and Majors

Major	Degree	Concentration	Administered By
Communication	M.A.	—	Hugh Downs School of Human Communication
	Ph.D.	Communicative development, intercultural communication, organizational communication	Hugh Downs School of Human Communication
Justice Studies	M.S. ¹	—	School of Justice Studies
	Ph.D. ²	Criminal and juvenile justice; dispute resolution; law, justice, and minority populations; law, policy, and evaluation; women, law, and justice	Committee on Law and Social Sciences
Mass Communication	M.M.C.	—	Walter Cronkite School of Journalism and Mass Communication
Public Administration	M.P.A.	Nonprofit administration	School of Public Affairs
	Ph.D.	—	School of Public Affairs
Recreation	M.S.	—	Department of Recreation Management and Tourism
Social Work	M.S.W.	Advanced direct practice; planning, administration, and community practice	School of Social Work
	Ph.D.	—	School of Social Work

¹ Graduate students in the Department of Anthropology and the School of Justice Studies are able to receive a concurrent M.A. degree in Anthropology and M.S. degree in Justice Studies.

² This program is administered by the Graduate College.

The School of Justice Studies offers a Master of Science degree in Justice Studies and administers the interdisciplinary Ph.D. program in Justice Studies under the auspices of the Graduate College.

School of Social Work. The School of Social Work offers the full complement of social work academic programs: Bachelor of Social Work, Master of Social Work, and Ph.D. The mission and the goals of the school are consistent with the university’s mission and overall objectives, as can be seen in the school’s focus on excellence in professional instruction; the advancement of social work research; the understanding of social issues; and public/community service. Central to the mission of the school is the emphasis on the understanding of and respect for the unique cultural diversity of the Southwest and the promotion of social and economic justice.

GRADUATE PROGRAMS

Graduate degree programs as shown in the “College of Public Programs Graduate Degrees and Majors” table, on this page, are offered by the faculty within the college.

One of the unique features of an interdisciplinary program is that it uses faculty research and teaching interests from a large number of academic units. Students may tailor a course of study to fit individual needs and goals.

ADMISSION REQUIREMENTS

Admission requirements of all advanced degree programs within the college are connected with those required by the Graduate College. In addition, individual units may require further supporting materials, such as letters of recommendation, scores on the Graduate Record Examination, statements of educational and career goals, and writing samples.

Applicants should refer to requirements specified by the academic unit under each degree program in this catalog.

SPECIAL PROGRAMS

Concurrent M.A. in Anthropology and M.S. in Justice Studies. Graduate students in the School of Justice Studies and the Department of Anthropology may pursue a concurrent M.S. degree in Justice Studies and M.A. degree in Anthropology with a concentration in social-cultural anthropology. The purpose of the program is to provide individuals with combined, complementary knowledge and skills for basic and applied research; as well as administrative and educational activities related to both disciplines. Students must be admitted separately to each program, following the guidelines established by the Graduate College, Department of Anthropology, and School of Justice Studies. Additional information on concurrent degrees may be obtained from the respective academic units.

Concurrent Ph.D. in Justice Studies/J.D. The purpose of the Ph.D. in Justice Studies/J.D. is to provide a rigorous educational program for highly qualified students interested in pursuing academic careers in law, law and the social sciences, or law and philosophy.

COLLEGE FACILITIES

Microcomputer training and remote site terminal access are available to students in all programs within the College of Public Programs. Academic units provide facilities, equipment, and support for student research, including laboratory space, computer terminals connected to the mainframe computer, and personal computers for individual student use. See “Computing Facilities and Services,” page 30.

Broadcast laboratories within the School of Journalism and Mass Communication have in-studio and ENG-EFP

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equipment, and provide facilities for writing and the other necessary broadcasting skills.

ADVISING

Advising of graduate students is usually handled by graduate faculty or a committee. Once admitted, students are typically assigned a temporary faculty advisor in the potential areas of specialization who will assist in planning a course of study. For those degree programs requiring the completion of a thesis, a chair and thesis supervisory committee are selected by the director of graduate studies, in consultation with the student, and appointed by the dean of the Graduate College.

ACCREDITATION

The Walter Cronkite School of Journalism and Mass Communication is accredited by the Accrediting Council on Education in Journalism and Mass Communication (ACEJMC). The Master of Public Administration program is accredited by the National Association of Schools of Public Affairs and Administration. The School of Social Work is fully accredited by the council on Social Work Education.

College of Technology and Applied Sciences

www.east.asu.edu/ctas

Albert L. McHenry, Ph.D., Dean

PURPOSE

The College of Technology and Applied Sciences (CTAS) offers professional degree programs leading to the Master of Science in Technology (M.S.Tech.) degree. These degree programs are intended as preparation for a career in a selected branch of technology or as the foundation for further study. Graduates of these programs are provided with technical and professional skills for use in leadership positions in industry and education.

ORGANIZATION

The M.S.Tech. degree is offered through the Graduate College by the faculty in the College of Technology and Applied Sciences and its four departments: the Departments of Aeronautical Management Technology, Electronics and Computer Engineering Technology, Information and Management Technology, and Mechanical and Manufacturing Engineering Technology. Faculty members administering the programs have been selected because of their relevant backgrounds in industry and business along with their academic training and teaching experience.

GRADUATE PROGRAMS

Graduate programs as shown in the "College of Technology and Applied Sciences Graduate Degrees and Majors" table, page 83, are offered by the faculty within the college.

ADMISSION REQUIREMENTS

Admission to the degree program requires the completion of all general admission requirements and procedures set forth by the Graduate College. CTAS also requires an appropriate baccalaureate degree from an accredited college or university, with a minimum of 30 semester hours in technology or its equivalent and 16 semester hours of physical science and mathematics appropriate to the program pursued. The specific requirements vary within each department.

Graduate work presupposes an adequate technical preparation in a selected technology at the undergraduate level. Deficiencies for admission to the graduate program, if any, are specified at the time of admission. The applicant's past work and professional experience are also evaluated and taken into consideration when determining admission classification. To be considered for regular admission, a 3.00 GPA is required.

ADVISING AND PROGRAM OF STUDY

The program of study is planned in consultation with an appointed supervisory committee. It is designed for flexibility, permitting the student to select a combination of courses in a technological area and a supporting area to meet individual career goals.

A minimum of 33 semester hours is required for the degree program. Of these, a minimum of 15 semester hours must be 500-level courses and part of the approved program. A maximum of 12 hours of course work may be taken from offerings outside CTAS with approval of the appropriate academic program or department. Programs of study for the M.S.Tech., with an interdisciplinary area of concentration, may have up to but not more than 15 hours of course work drawn from areas outside CTAS at the discretion of the program or department in which the concentration is administered. A maximum of nine semester hours of appropriate course work completed before admission may be included in the program of study. Specific credit requirements are as follows:

Thesis Option

Technical area of emphasis.....	15-18
Supporting area	6-9
Thesis writing course	3
Research	6
Minimum total.....	33

Applied Project Option

Technical area of emphasis.....	15-18
Supporting area	9-12
Research/applied project	3
Research/writing course	3
Minimum total.....	33

A master's degree candidate forms a supervisory committee, the chair of which is from one of four CTAS depart-

College of Technology and Applied Sciences Graduate Degrees and Majors

Major	Degree	Concentration	Administered By
Technology	M.S.Tech.	Aeronautical engineering technology, manufacturing engineering technology, mechanical engineering technology	Department of Mechanical and Manufacturing Engineering Technology
		Aviation human factors, aviation management technology	Department of Aeronautical Management Technology
		Computer systems engineering technology, electronic systems engineering technology, instrumentation and measurement technology, microelectronics engineering technology	Department of Electronics and Computer Engineering Technology
		Environmental technology management, fire service administration, information technology, management of technology	Department of Information and Management Technology
		Global technology and development, security engineering technology	College of Technology and Applied Sciences

ments. The chair and the committee members assist the student in selecting and approving appropriate courses to meet the degree requirements and student's goals.

The Department of Aeronautical Management Technology offers concentrations in aeronautical management technology and aviation human factors.

The Department of Electronics and Computer Engineering Technology offers concentrations in computer systems engineering technology, electronics systems engineering technology, instrumentation and measurement technology, and microelectronics engineering technology.

The Department of Information and Management Technology provides students the opportunity to study environmental technology management, fire service administration, information technology, and management of technology.

The Department of Mechanical and Manufacturing Engineering Technology offers concentrations in aeronautical engineering technology, manufacturing engineering technology, and mechanical engineering technology.

SPECIAL PROGRAMS

Concentration in Global Technology and Development (GTD)

The global technology and development (GTD) concentration is an interdisciplinary program offered by the CTAS faculty. This concentration gives students a comprehensive understanding of systems of technology, how they interface, and their role in global economic, political, and social

development and change. The GTD concentration integrates the study of economic, social, and political development with technology course work to explore issues critical to 21st-century globalization and the role and impact of technological innovations on societies around the world. Students completing the GTD concentration gain the knowledge and skills to become "technology interpreters" for careers in technology-related public policy, government service, international development, and international management.

The GTD concentration consists of two seminars in global technology and development, and technology and the international political system, and one core course (chosen from several that are offered) in each of the four GTD technology content areas: telecommunications, transportation, commerce, and sustainable development. Students are able to select elective courses from a wide range of topics in social science and/or technology to create their own individualized specialization. An emphasis is placed on the acquisition of solid research skills with a required sequence in applied research methodologies and tools. A minimum of 33 semester hours is required (24 of which must be at the 500 level or above), including an applied project or thesis. The exact program of study—including elective courses leading to an area of specialization, and the final project or thesis—is planned in consultation with a faculty advisor from the GTD faculty committee.