# Bianca L. Bernstein, Ph.D.

#### Dean

Through the faculty, Arizona State University's Graduate College offers programs to meet the educational needs of those who already hold baccalaureate and master's degrees. While many students prepare for careers in research, the professions, and the arts, others study for personal enrichment. Both part-time and full-time students are enrolled in 91 master's and 48 doctoral majors encompassing hundreds of concentrations and specialties. Other students explore new areas of interest or prepare for career advancements apart from formal degree programs.

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

One distinctive project that magnifies our dedication to graduate students is our 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 our nation's colleges and universities.

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.

Our funded programs, together with our more than 30 research centers and institutes, provide assistantships and training for many of our graduate students; further, the centers coordinate conferences, colloquia, and special seminars to heighten the learning experience. The Office of the Vice Provost for Research provides seed money to enable our 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.** About 11,000 students from all 50 states and more than 100 nations are enrolled in graduate study at the university. The 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 collo-

quia and seminars where students and faculty discuss their work in an intimate, intellectual environment supportive of student development. The result is a spirited, lively atmosphere in which students and faculty members get to know each other through collaborative research and intellectual exchange.

#### **GRADUATE PROGRAMS**

#### **Degree Programs**

Although graduate degree programs differ in many ways, they all share two important characteristics. First, in comparison to baccalaureate programs, they demand a deeper and broader understanding of a body of knowledge in a recognized discipline or profession. Second, in master's and especially in doctoral programs, graduate students prepare to make original contributions to their fields through research and other creative activities of a high order. In contrast, then, to the broad-based baccalaureate degree, graduate degrees are specialized. ASU offers several types and levels of postbaccalaureate degrees.

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

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

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

**Professional Degrees.** The professional or practice-oriented degree programs have slightly different names and distinct academic missions. The names of the degrees are commonly tied to the academic unit offering the program, for example, Master of Business Administration (M.B.A.), Master of Music (M.M.), Master of Social Work (M.S.W.), and Doctor of Public Administration (D.P.A.). With the objective of preparing students for professional practice, such programs require rigorous preparation in the fundamental literature and scholarship of the field. Some degrees require demonstrated expertise through an internship, an

Major	Degree	Administered by
Creative Writing	M.F.A.	Creative Writing Committee
Curriculum and Instruction Concentrations: curriculum studies, early childhood education, educational media and computers, elementary education, English education, exercise and wellness education, math education, music education, physical education, reading education, science education, special education	Ph.D.	Interdisciplinary Committee on Curriculum and Instruction
Exercise Science Concentrations: biomechanics, motor behavior/ sport psychology, physiology of exercise	Ph.D.	Committee on Exercise Science
Justice Studies Concentrations: criminal and juvenile justice; dispute resolution; law, justice and minority populations; law, policy, and evaluation; women law, and justice	Ph.D.	Committee on Law and Social Sciences
Public Administration	D.P.A.	Committee on Public Administration
Science and Engineering of Materials Concentrations: high-resolution nanostructure analysis, solid-state device materials design	Ph.D.	Committee on the Science and Engineering of Materials
Speech and Hearing Science Concentrations: developmental neurolinguistic disorders, neuroauditory processes, neurogerontologic communication disorders	Ph.D.	Committee on Speech and Hearing Science
Statistics	M.S.	Committee on Statistics

Interdisciplinary Graduate Degrees and Majors Overseen by the Graduate College

exhibition (art), a performance (dance), or a recital (music). Examples of ASU fields in which academic units offer professional programs include architecture and design, business, education, engineering, health services administration, law, nursing, public administration, and social work.

#### Nondegree Graduate Study

Many serious students enter graduate studies not intending to obtain a new degree but rather to enhance personal knowledge. They may want to advance in their present career, acquire the background to make a career change, or make up academic deficiencies before entering a degree program. All graduate students, degree or nondegree, enjoy the benefits of cultural and intellectual activities at the university, such as colloquia, seminars, and conferences focusing on the latest scholarship in the field. By consulting with appropriate academic units, students can learn which courses are suitable to their needs.

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

**Student Services for Nondegree Students.** The Graduate College maintains an advising office open year-round. See "Graduate Student Support Services," page 56, for more information.

#### Graduate Studies and University Environment

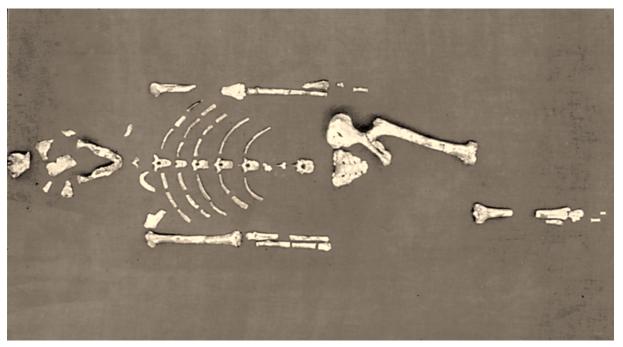
The Graduate College spans the university in supervising graduate studies and offering all postbaccalaureate degrees except the Juris Doctor, which is administered by the College of Law. Since more than 1,600 ASU faculty members teach graduate students in more than 115 instructional units,

the Graduate College works closely with the other colleges and academic units. In most cases, graduate instruction is offered by units that also provide related undergraduate programs.

Interdisciplinary Study. Although most graduate programs are offered by academic units, diverse interdisciplinary programs cross academic disciplines and come under the supervision of the Graduate College. Many majors are in fields that are still emerging as recognized academic disciplines and, therefore, do not customarily form the academic basis for departments. Other fields of study are inherently interdisciplinary and do not fit well with conventional disciplines around which departments are formed. Curricula must reflect intrinsically broad disciplinary affinities, and faculty must be drawn from more than one academic unit.

Currently, the Graduate College oversees nine interdisciplinary programs and has joint responsibility with the College of Education for another; several others are planned. Existing programs include the Gerontology Program (Certificate in Gerontology jointly offered by ASU Main and ASU West), Creative Writing (M.F.A.), Curriculum and Instruction (Ph.D.) (jointly administered with the College of Education), Exercise Science (Ph.D.), Justice Studies (Ph.D.), Public Administration (D.P.A.), Science and Engineering of Materials (Ph.D.), Speech and Hearing Science (Ph.D.), Statistics (M.S.), and Transportation Systems (Certificate in Transportation Systems).

Other interdisciplinary degree programs include Communication (Ph.D.) (administered by the College of Public Programs), History and Theory of Art (Ph.D.) (jointly offered



Replicas of the skeletal remains of "Lucy," human fossils dated to just less than 3.18 million years old, part of the collection at the ASU Institute of Human Origins IHO photo

with the University of Arizona (administered by the School of Art), Humanities (M.A.) (administered by the College of Liberal Arts and Sciences), and Molecular and Cellular Biology (M.S., Ph.D.) (administered by the College of Liberal Arts and Sciences).

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

**Interdisciplinary Committee on Linguistics.** Linguistics at ASU is interdisciplinary in nature. The linguistics faculty come from the Departments of Anthropology, Communication, Computer Science and Engineering, English, Languages and Literatures, Philosophy, Psychology, and Speech and Hearing Science and from the College of Education.

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

Faculty from three departments (Anthropology, English, 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.

**Certificate Programs.** A number of certificate programs are offered by various academic units or programs on campus (see "Certificate Programs Offered at ASU Main, East, and West," page 17).

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

Much of this work is associated with campus research centers that help to develop proposals, coordinate activities, and bring together in colloquia and conferences students and faculty with common intellectual interests. Such centers include the Center for Solid-State Science, the Manufacturing Institute, the Institute of Human Origins, the Hispanic Research Center, and the Preventive Intervention Research Center. For more information, see "Research Centers, Institutes, and Laboratories," page 34.

**Research Facilities.** The university lends support to research in diverse ways, including extensive facilities for research and instructional programs. Recently built 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 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 Libraries and Collections," page 30). 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 collection on child drama 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 advising, individual mentoring for disadvantaged students, and financial support, as well as orientation sessions, workshops, career seminars, and research conferences.

The Graduate College Student Programs/Services maintains a variety of programs specifically for graduate and nondegree students.

**Graduate College Financial Assistance Office.** The Graduate College Financial Assistance Office meets the needs of graduate and professional students. Students may receive financial services at Wilson Hall, without having to visit other offices on campus. Students are offered general information about graduate financial assistance at ASU, may 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. Refer to "Financing Graduate Studies," page 47, for a full description of graduate financial support and services or visit the Web site at www.asu.edu/graduate/ gradaid.

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 Academic Advising Office supplies general information about policies, procedures, requirements, and support services. Appointments are available throughout the year.

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 & Consultation, offers seminars to groups of graduate students interested in exploring career-related subject matters. Examples of seminar topics are dual career issues, the impact of values on career decision making, and transferable skills.

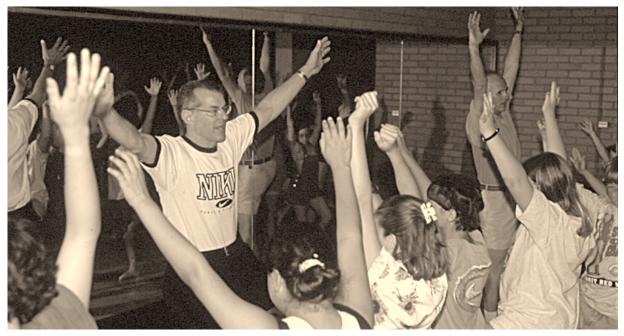
*Career Planning Services for Graduate Students.* In conjunction with Career Services and Counseling & Consultation, the Graduate College provides a brochure listing numerous career planning services for graduate student needs. This publication is also available at www.asu.edu/ career.

**Diversity Programs.** The Graduate College's Diversity Programs are designed to increase the number of graduate students from groups underrepresented in their chosen field of study. Students interested in these programs must first go to their respective departments for nomination.

*Diversity Assistantship Program (DAP).* The purpose of this merit-based program is to support research and creative activities related to a student's field of study. Nominations are made by departments, and recipients are supervised by a faculty member.

Academic Support Program (ASP). The purpose of ASP is twofold: financial assistance and peer mentoring. ASP is available primarily to first-year students: However, departments are asked to provide a student's subsequent funding. The program is based on financial need and the nominations of students by departments. Financial support is provided in the form of a federal work-study to support field-related research that is supervised by a faculty member. For additional academic support, a student meets weekly with an assigned peer mentor who is two or more years advanced in the academic program.

The Social and Academic Mentor Program. The Graduate College Social and Academic Mentor (SAM) program is designed to recruit top graduate students from domestic, international, and underrepresented populations. Academic units submit applications to the Graduate College to nominate a first-year student (mentee) and peer mentor match. The mentor, two or more years advanced in the program, promotes the mentee's social and academic integration into graduate school 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.



Exercise Science and Physical Education Professors Charles Corbin, far right, and Robert Pangrazi are renowned experts for their research in the area of children and exercise.

**Orientations.** Each semester, the Graduate College hosts orientations for new graduate students and teaching assistants (TAs).

In addition to the general orientation, teaching assistants have the opportunity to enrich and enhance their teaching through seminars offered each semester. At least two seminars are mandatory for first-time TAs. Among other topics, TAs can attend sessions on teaching lab sciences, human diversity, critical thinking, classroom management, ethical issues, and multimedia applications in the classroom.

Workshops for Undergraduate Students Considering

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

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

**Format Office.** The thesis, dissertation, or equivalent is the culmination of an important stage of graduate studies. By researching and writing this final work, graduate students are able to show that they have acquired skills essential to a discipline. The Graduate College publishes a *Format Man*-

*ual* as a guide in preparing the master's or doctoral document. For more information, visit www.asu.edu/graduate/ formatmanual on the Web.

**Publications Program.** The Graduate College publishes a number of brochures, fliers, and other items during the year.

#### Graduate Council

The Graduate Council establishes general policies for graduate programs and serves as an advisory board to the dean. As part of its duties, the council reviews proposals for new degree programs and concentrations, regularly conducts reviews of established academic programs, and sets policies and general standards for graduate admissions. Sixteen faculty members and one student serve on the council, representing a wide variety of degree programs, with at least one member representing each college in the university. An Academic Senate representative is also elected to serve. Council members are appointed by the president of the university.

#### Offices of the Graduate College

The general offices of the college, including those of the dean, admissions, advising, financial assistance, and operations are located on the first floor of Wilson Hall in the center of campus. College offices are open from 8:00 A.M. to 6:00 P.M. Monday through Thursday; 8:00 A.M. to 5:00 P.M. on Friday. The Graduate College may also be contacted by e-mail at asugrad@asu.edu or telephone 480/965-3521. The Web address is www.asu.edu/graduate.

# **Celebrating 60 Years of Excellence and**



The first three members of the ASU Graduate College Hall of Fame pose with President Lattie Coor and Dean Bianca L. Bernstein. From left: Lorenzo Lisonbee, Jesse Jones, Bianca Bernstein, Lattie Coor, and Steadman Upham. Tim Trumble photo

ARIZONA STATE UNIVERSITY observed 60 years of graduate education during a celebration titled "So Far, So Fast: 1938–1998."

Highlights included the inaugural induction ceremony of Graduate College Hall of Fame members, performances and exhibits indicative of graduate education, and a time capsule burial and dedication ceremony.





Assistant Professor Pamela Swan takes the pulse of a visitor at the Exercise/Wellness Fitness Monitoring booth. Tim Trumble photo

Mark Sunkett, African drummer and professor of music, contributed to the festivities of the celebration with his African drumming group. Tim Trumble photo

Spectators donned 3-D glasses for a panoramic view of the martian landscape. The photo was taken by Mars Pathfinder, and the image was generated by the ASU Space Photography Laboratory. Tim Trumble photo



# **Innovation in Graduate Education**





Above, some of the items symbolic of graduate education in 1998 that were placed in the time capsule (shown right as it was buried). The capsule is to be unearthed in 2038, when ASU celebrates the 100-year anniversary of graduate education. Above: Tim Trumble photo Right: Dennis Durband photo



Above, Professor of Psychology in Education Robert Strom cuts the ribbon over the plaque at the time capsule dedication ceremony. Right, the plaque. Above: Tim Trumble photo Right: Dennis Durband photo





# College of Architecture and Environmental Design

# John Meunier, M.Arch.

Dean

### PURPOSE

The college provides graduate education for professional, research, and academic careers in architecture, design, environmental resource management, 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, agribusiness, and public affairs.

#### **GRADUATE PROGRAMS**

The new Ph.D. degree program in Environmental Design and Planning is a collegewide interdisciplinary degree offered by faculty representing the different disciplines comprising the Schools of Architecture, Design, and Planning and Landscape Architecture. Three areas of concentration are available: design; planning; and history, theory and criticism.

Faculty in the College of Architecture and Environmental Design offer six master's degree programs through the Graduate College: a professional program leading to the NAAB accredited degree Master of Architecture (the twoyear as well as three-plus-year programs), a professional graduate program leading to the PAB accredited Master of Environmental Planning degree, a research and applications M.S. in Building Design, a M.S. degree in Environmental Resources, and the Master of Science in Design degree in Design 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. degrees in Building Design. Faculty in the School of Planning and Landscape Architecture offer the Master of Environmental Planning and the M.S. degrees in Environmental Resources. Faculty in the School of Design offer the professional Master of Science in Design degree.

#### ADMISSION REQUIREMENTS

Applicants to each of the seven 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 89. For application requirements and deadlines of each program, refer to the specific program section within "Graduate Programs and Courses," page 103.

**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-hour postmasters program, and not as an 84-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 from applicants whose native language is not English.

**Master of Architecture.** Applicants to the two-year program must have completed a four-year baccalaureate degree with a major in architectural studies or a similar preprofessional degree in architecture. The degree should be from an institution offering a National Architectural Accreditation Board-accredited degree in architecture. Applicants to the three-plus-year program must have completed a four-year baccalaureate degree in any discipline. International applicants whose native language is not English must achieve a TOEFL score of 550 or above.

**M.S. Degree in Building Design.** Students who have completed a professional baccalaureate degree in architecture (five or six years) or a baccalaureate degree in engineering or a related area and wish to pursue advanced study and research may apply for admission to this program. International applicants whose native language is not English must achieve a TOEFL score of at least 550.

**Master of Environmental Planning.** Applicants must hold a baccalaureate degree. International applicants whose native language is not English must achieve a TOEFL score of 550 or above.

**M.S. Degree in Environmental Resources.** Applicants are expected to have completed 18 semester hours in environmental sciences or closely related subjects and hold a baccalaureate degree.

Master of Science in Design Degree in Design. Applicants must hold a baccalaureate degree in graphic design, industrial design, interior design, or a related design disci-

Major	Degree	Administered by
Architecture	M.Arch.	School of Architecture
Building Design	M.S.	School of Architecture
Concentrations: computer-aided design, energy		
performance and climate-responsive architecture	е,	
facilities development and management		
Design	M.S.D.	School of Design
Concentrations: graphic design, industrial design	1,	
interior design		
Environmental Design and Planning	Ph.D.	Environmental Design and Planning and Executive Committee
Concentrations: design; history, theory, and		
criticism; planning		
Environmental Planning	M.E.P.	School of Planning and Landscape Architecture
Concentration: urban planning		
Environmental Resources	M.S.	School of Planning and Landscape Architecture

#### College of Architecture and Environmental Design Graduate Degrees and Majors

pline 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.

#### SPECIAL PROGRAMS

A concurrent Master of Architecture/Master of Business Administration degree program is available. The School of Architecture offers programs for study in Paris and Italy. 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.

The Master of Science in Environmental Resources program often works with state and federal agencies concerned with a range of investigations from hydrology research and shrub control to livestock and wildlife concerns.

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. The university maintains a computer site in the building and there is a local area network that ties together faculty, studio, and library resources. Emphasis is on miniand microcomputer modeling, simulation, and design applications (see "Computing Facilities and Services," page 32). 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.

As a branch of the university library, the college library is located in the expansion and provides easy access to books, periodicals, and reference materials for students and faculty. The collection includes approximately 30,000 volumes. Special research collections on the work of Paolo Soleri and Frank Lloyd Wright are located in an archival quality special collections suite.

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.

#### ADVISING

Architecture. Students should contact the graduate secretary for general information about the school's programs and procedures. In addition, a graduate coordinator is available for preadmission and general advising. Upon enrollment, each student is assigned a faculty advisor for continuing assistance. Call 480/965-3536 or e-mail arch.grad@asu.edu for more information.

**Design.** Preadmission information, advising, and continued support are provided by the director of the school and the graduate program coordinator. Call 480/965-4135 or 480/965-4239 for more information.

**Planning.** The school director provides preadmission information and general advising. Each admitted student is initially assigned a faculty advisor but may later select a supervisory chair. This faculty member later serves as a chair of the committee. Call 480/965-7167 for more information.

#### ACCREDITATION

In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), 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 degree programs may consist of a preprofessional undergraduate degree and a professional graduate degree, which, when earned sequentially, comprise an accredited professional education. However, the preprofessional degree is not, by itself, recognized as an accredited degree.

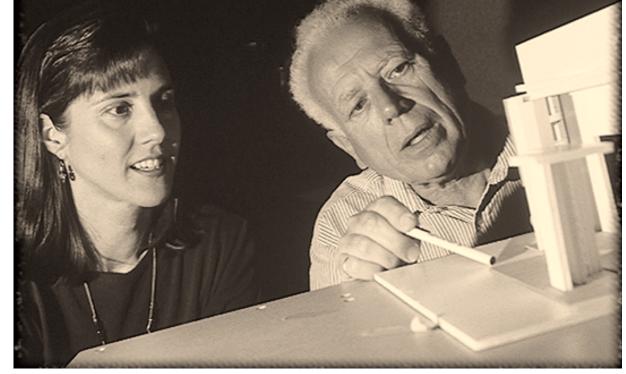
The Master of Architecture program at ASU is fully accredited by the NAAB. The Master of Architecture

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.

The School of Architecture is a full member of the Association of Collegiate Schools of Architecture, the Environmental Design Research Association, 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 program is accredited by the Planning Accreditation Board.



Doctoral student Pat Olsen, left, observes a model with Regents' Professor of Architecture Jeffrey Cook.

Tim Trumble photo

# Larry E. Penley, Ph.D.

### Dean

#### PURPOSE

The College of Business is a professional school that pursues excellence in instruction and research. The pursuit of excellence in programs of instruction implies that the college 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 College 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 College 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 College 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, process, and outcomes.

The College 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 college.

Strategies also include, relative to the doctoral program, raising admission standards, increasing stipends, 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 retention and graduation rates of minority students through programs at the M.B.A. and doctoral levels.

Finally, the college 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 college'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 college'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, the Center for Advanced Purchasing Studies, the Center for Business Research, the Center for Services Marketing and Management, and the Lincoln Center for Ethics.

#### **GRADUATE PROGRAMS**

The M.B.A. program is the premier professional degree in the College of Business. The college 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 at the ASU Research Park. The faculty also offer the Ph.D. degree in Economics and in Business Administration, with concentrations in accountancy, finance, health services research, information management, 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 Information Management and in Economics, an interdisciplinary program leading to a M.S. degree in Statistics, and the Master of Taxation.

#### ADMISSION REQUIREMENTS

Applicants to all degree programs must meet the minimum Graduate College academic requirements. 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. Some degree programs require the submission of a statement of purpose from applicants and letters of recommendation. In addition, Test of English as a Foreign Language and Test of Spoken English scores are required of international applicants whose native language is not English.

#### SPECIAL PROGRAMS

**Dual/Concurrent Degree Programs.** The College of Business and the American Graduate School of International Management (Thunderbird) have developed a dual degree and cross-registration graduate program 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 a Master of Business Administration

College of Business (	Graduate Deg	rees and Majors
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Major	Degree	Administered by
Accountancy and Information Systems	M.A.I.S.	School of Accountancy and Information Management
Business Administration	M.B.A.	College of Business
Business Administration	Ph.D.	College of Business
Concentrations: accountancy, finance,		-
health services research, <sup>1</sup> information		
management, management, marketing,		
supply chain management		
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
Statistics	M.S. <sup>2</sup>	Committee on Statistics
Taxation	M.Tax.	School of Accountancy and Information Management

<sup>1</sup> Applications for this program are not being accepted at this time.

<sup>2</sup> This program is administered by the Graduate College. See "Graduate College," page 53.

(M.B.A.) degree at ASU and a Master of International Management (M.I.M.) degree at Thunderbird. Consequently, students in the dual degree program may earn their degrees earlier than those who pursue the degrees separately. Applicants must be regularly admitted to both the M.B.A. and M.I.M. programs and must petition for acceptance into the dual degree program through the school of initial attendance. Dual degree program participants and regularly admitted full-time students in the M.B.A. program may petition to take selected course work at Thunderbird at no additional tuition fees after completion of one year and prerequisites for Thunderbird are complete.

The College of Business and the Groupe Ecole Supérieure de Commerce Toulouse have developed a dual degree program for students interested in business administration and international management. Call 480/965-3332 for more information.

The college also offers the following concurrent degrees: Master of Business Administration/Master of Architecture, Master of Science in Economics/Juris Doctor, Master of Business Administration/Master of Science in Economics, Master of Business Administration/Juris Doctor, Master of Business Administration/Master of Health Services Administration, Master of Health Services Administration/Juris Doctor, and Master of Health Services Administration/Master of Science in Nursing, Master of Business Administration/Master of Science in Information Management, Master of Business Administration/Master of Accountancy and Information Systems.

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 dual/concurrent degree programs. The M.B.A./J.D. is best completed by attending one year in the law school, then attend the M.B.A. program after the first or second year, and finally return to the law school to complete the third year. Students will not be 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 College 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 and 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.

**Bank One Economic Outlook Center.** The Bank One Economic Outlook Center serves as the economic forecasting unit of the college and is responsible for the publication of the Arizona Blue Chip, Western Blue Chip, and Blue Chip Job Growth Update. The center sponsors seminars and workshops on the national and regional economies.

**Center for Advanced Purchasing Studies.** The Center for Advanced Purchasing Studies is a national affiliation agreement between the College of Business at ASU and the National Association of Purchasing 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 Marketing and Management.** The Center for Services Marketing and Management 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 nonservices firms that are using service and quality as a competitive edge.

Joan and David Lincoln Center for Ethics. The Joan and David Lincoln Center for Ethics conducts research and offers educational programs on ethical issues in business, government, and the professions.

**Manufacturing Institute.** The Manufacturing Institute is a joint venture of the College of Business and the College of Engineering and Applied Sciences, established to enhance manufacturing research and industrial collaboration at the interface 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.

**Dean's Council of 100.** The Dean's Council of 100, a prestigious group of area business leaders, represents the college's innovative partnership between business and education. A major goal of the council is development of private support for the priority needs of the College of Business. Membership is by invitation only.

Economic Club of Phoenix. The Economic Club of Phoenix is composed of business, labor, government, and academic leaders who recognize that, as frontrunners in one of the nation's fastest-growing metropolitan areas, they need information and access to expertise to deal effectively with rapid economic changes. Its programs bring current and future leaders together and provide them with the opportunity to meet and hear influential speakers.

**Council of Emeritus Advisers.** The Council of Emeritus Advisers founded by the College of Business and Dean's Council of 100, is a select group of retired executives who advise the dean and invite nationally known experts to Arizona as visiting scholars, lecturers, and speakers.

**Dean's Board of Excellence.** The Dean's Board of Excellence is composed of young business and community leaders committed to promoting excellence by awarding outstanding student and faculty performance. The Dean's Board of Excellence also enhances relations between the college and the business community through a discussion forum and communications with the dean.

**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. The Washington Campus program at Georgetown University provides graduate business students with an in-depth understanding of the federal government and its relationship to the business community. ASU is one of 17 select universities that offer this unique opportunity. Participants earn graduate credit, observe the intricacies of national politics, and enjoy the excitement of the nation's capital. Competitive scholarships are available to business graduate students to cover the costs of lodging, meals, and instructional expenses.

#### **COLLEGE FACILITIES**

The College of Business offers one of the most modern and sophisticated environments available for professional graduate study. The college facilities provide attractive and comfortable classrooms, computer systems, study areas, a television studio, modern auditoriums, and a graduate student reading room and lounge. Both mainframe interactive and networked microcomputer facilities are available to graduate students throughout the two business buildings. Refer to "Computing Facilities and Services," page 32.

#### **Black Student M.B.A. Association**

The Black M.B.A. Association is an organization of ASU M.B.A. students dedicated to enhancing the educational experience of its members, promoting attributes of the M.B.A. program to the local business community, promoting awareness within the African American community of business, education, and economic development, and assisting the development of career opportunities for its members.

#### **Collegiate Volunteer Council**

The Collegiate Volunteer Council (CVC) was created to foster volunteerism incorporating the assistance of students, faculty, and staff. Its goal is to provide value-added contributions to the community by assisting those in need. Traditional projects have included volunteering at the Special Olympics, the Papago Park Clean-up, the Jingle Bell Run for Arthritis, and holiday food and toy drives.

#### **Graduate Women in Business**

The purpose of the Graduate Women in Business (GWB) is to promote the professional and personal development of women graduate students. As part of the National Network of Graduate Business School Women, GWB provides a link among women graduates in accredited business programs nationwide. The ASU chapter is open to men as well as women and offers activities and seminars in professional development and gender issues.

#### **Hispanic M.B.A. Student Association**

The Hispanic M.B.A. Student Association (HMBASA) was created to meet the needs of Hispanic M.B.A. students. Members participate in a wide range of community services, coordinate a variety of professional development programs, and are offered the opportunity to become members of HMBASA's professional affiliated organization, the National Society of Hispanic MBAs. All M.B.A. students are encouraged to join and participate in HMBASA activities.

#### International Business Association—I.B.A.

The primary mission of the International Business Association (IBA) is to assist M.B.A. students in acquiring the substantive knowledge, job-search skills, and personal contacts necessary to enter and prosper in the international business field. IBA conducts seminars and panel discussions on important international business topics. These events which generally are open to students, faculty, and others address topics such as global or regional economic issues, cultural conflicts in cross-border activities, and job hunting strategies.

#### Masters Consulting Group

The Masters Consulting Group (MCG) is a fully incorporated, nonprofit organization run solely by M.B.A. students. MCG provides opportunities for M.B.A. students to work as professional consultants in different functional specialties. Thus, students can complement their course work with real world experience.

#### M.B.A. Asia Student Association

The MBAsia is a professional and social organization focused on promoting Pacific Rim opportunities for graduate business students. It strives to offer an exchange of learning through seminars, panel discussions, and conferences open to the whole community. MBAsia is also a forum for global, cultural, social interaction at events such as the monthly Asian Lunches and the semiannual Asian Dinner. Membership is open to any graduate business student with an interest in the Pacific Rim.

#### **M.B.A.** Association

The M.B.A. Association at ASU is an independent, professional organization whose purpose is to provide a fully recognized, formally structured representative body through which M.B.A. students may act or communicate in concert on items of interest. The M.B.A. Association sponsors an intensive agenda of experiences outside the classroom which include leadership development activities, executive presentations, career enhancement seminars, and social events.

#### M.B.A. Student Ambassadors

The ASU M.B.A. Student Ambassadors are dedicated to promoting, developing, and participating in the community relations and recruitment activities of the M.B.A. Program. The ambassadors interact with many different groups including students, alumni, faculty, and administrative staff.

#### ADVISING

Information sessions are held daily (Monday, Wednesday, and Friday at 10:00 A.M. and Tuesday and Thursday at 2:00 P.M.) in the M.B.A. Program Office, BA 140. M.B.A. brochures may be obtained at the office, call 480/965-3332, or e-mail at asu.mba@asu.edu.

#### ACCREDITATION

The College of Business and its School of Accountancy and Information Management are accredited by the American Assembly of Collegiate Schools of Business (AACSB). The AACSB 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.



Water fountain near the College of Business

Tim Trumble photo

# David C. Berliner, Ph.D.

#### Dean

#### PURPOSE

The College of Education is committed to the development of innovative programs that prepare graduate students for leadership roles in solving educational problems. The college provides a stimulating, challenging forum in which research and practice are viewed as essential and complementary. Faculty members are dedicated to producing quality scholarship and research that lead to excellence in teaching, professional practice, and administration of educational institutions.

#### ORGANIZATION

The College of Education is organized into three divisions.

#### **Division of Curriculum and Instruction**

Nicholas R. Appleton, Director (ED 409) 480/965-1644 E-mail: karen.schultz@asu.edu

Program Areas Early Childhood Education Educational Media and Computers Elementary Education Multicultural Education Reading and School Library Science Secondary Education Special Education

#### Degrees: M.A., M.Ed., Ed.D., Ph.D.

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. This division offers programs that prepare students for Arizona State teacher certification in the following areas: special, elementary, or secondary education. It is designed for students who have graduated from accredited colleges or universities with majors other than education. If desired, a master's degree may be pursued concurrently with teacher certification.

The M.A., M.Ed., and Ed.D. degrees in Curriculum and Instruction offer areas of concentration in bilingual education, communication arts, early childhood education, elementary education, English as a second language, Indian education, mathematics education, multicultural education, reading education, science education, secondary education, and social studies education. The Ed.D. also offers a concentration in curriculum studies.

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

Mary Lee Smith, Interim Director (ED 108) 480/965-6248 E-mail: delps@asu.edu http://tikkun.ed.asu.edu/elps

Program Areas Education Policy Studies Educational Administration and Supervision Higher and Postsecondary 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, social, and intellectual contexts in this country and abroad.

Two basic emphases exist within the division's programs. One strand focuses on the administration and policies of educational practices from preschool through secondary education. The other strand focuses on the administration and policies of postsecondary 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 databased and theoretical research. Qualitative and quantitative 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 301) 480/965-3384 E-mail: dpe@asu.edu

Program Areas Counseling Psychology Counselor Education Learning and Instructional Technology Lifespan Developmental Psychology Measurement, Statistics, and Methodological Studies School Psychology

#### Degrees: M.A., M.Ed., M.C., Ph.D.

All program areas within this division strongly emphasize research activities. Areas of concentration within Educational Psychology include 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: curriculum studies, early childhood education, educational media and computers, elementary education, educational media and computers, elementary education, English education, exercise and wellness education, music education, physical education, reading 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. 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. Several of the degrees have various concentrations.

#### 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 Center for Bilingual Education and Research 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.

The college's Technology Based Learning and Research Facility conducts research activity related to software evaluation and the use of microcomputers in schools.

#### **CERTIFICATION AND ENDORSEMENT**

Postbaccalaureate programs that lead to initial teaching certification are designed for people who hold bachelor's degrees in areas other than education. Postbaccalaureate programs are available in one of the following areas: elementary education, principalship, secondary education, special education, superintendent, and supervisor. Programs to earn endorsements, which are added to teaching certificates, include bilingual education, educating the gifted, library science, middle school education, reading, and teaching English as a second language. Programs that prepare students for certification by the State as a school counselor are offered by the Counselor Education Program.

#### **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 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, serves as a model preschool program for early childhood educators, and provides an opportunity for researchers to investigate how very young children grow and develop in an environment that encourages their personal and intellectual development.

The Arizona Educational Information System (AEIS) offers member school districts a computerized information retrieval system with access to thousands of educational topics.

The Center for Academic Precocity provides academic services to intellectually advanced students in grades K–12.

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Major	Degree	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
Concentration: counseling and student		
personnel	MA MEJ	Division of Comissions and Instanction
Curriculum and Instruction Concentrations: bilingual education, communication arts, early childhood education, elementary education, English as a second language, Indian education, mathematics education, multicultural education, <sup>1</sup> reading education, science education, secondary education, social studies education	M.A., M.Ed.	Division of Curriculum and Instruction
Curriculum and Instruction Concentrations: bilingual education, communication arts, curriculum studies, early childhood education, elementary education, English as a second language, Indian education, mathematics education, multicultural education, <sup>1</sup> reading education, science education, secondary education, social studies education	Ed.D.	Division of Curriculum and Instruction
Curriculum and Instruction Concentrations: curriculum studies, early childhood education, educational media and computers, elementary education, English education, exercise and wellness education, music education, physical education, reading education, science education, special education	Ph.D. <sup>2</sup>	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 Educational Media and Computers <sup>1</sup>	Ph.D. M.Ed.	Division of Educational Leadership and Policy Studies Division of Curriculum and Instruction
Concentration: business education		
Educational Psychology Educational Psychology Concentrations: lifespan developmental psychology; measurement, statistics, and methodological studies; school psychology	M.A., M.Ed. Ph.D.	Division of Psychology in Education Division of Psychology in Education
Higher and Postsecondary Education Concentration: higher education	M.Ed., Ed.D.	Division of Educational Leadership and Policy Studies
Learning and Instructional Technology	M.A., M.Ed.	Division of Psychology in Education
Learning and Instructional Technology Concentrations: instructional technology, learning	Ph.D.	Division of Psychology in Education
Social and Philosophical Foundations of Education	M.A.	Division of Educational Leadership and Policy Studies
Special Education	M.A.	Division of Curriculum and Instruction
Special Education Special Education Concentrations: gifted, mildly handicapped, multicultural exceptional, severely/multiply handicapped	M.Ed.	Division of Curriculum and Instruction

## **College of Education Graduate Degrees and Majors**

<sup>1</sup> Applications for this program are not being accepted at this time.

<sup>2</sup> This program is administered jointly by the College of Education and the Graduate College. See "Graduate College," page 53.

These services include individual assessment, talent identification, and a variety of courses.

The Counselor Training Center provides counseling for ASU students, faculty, staff, and the community-at-large in personal and career development, stress management, and marriage and family issues. Counseling is conducted by graduate students in Counseling and Counseling Psychology under the supervision of certified psychologists.

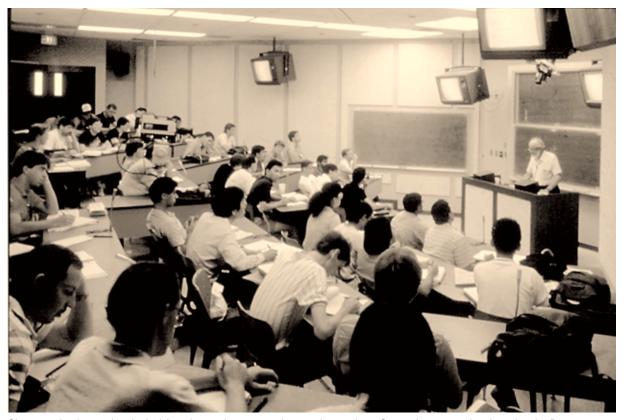
Other units within the college offering specialized research and educational services include the Office of Field Services; the Office of Diversity, Recruitment and Support Programs; and instructional resource libraries and collections in a number of curricular areas.

#### **ADVISING**

General career advising in a program area can be obtained by contacting the director of the division or the coordinator of the program area in which a degree program is offered. After admission to a degree program, specific advice related to degree activities is provided by supervisory committees.

### **ACCREDITATION AND AFFILIATION**

The Ph.D. programs in Counseling Psychology and 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 (CACREP). The College of Education is approved by the State Board of Education (Arizona). The college is affiliated with the University Council for Educational Administration, The Holmes Partnership, and is a member of AACTE.



Classes using instructional television give students several convenient options. Some classes can be viewed at the Downtown Center, ASU East, or ASU West sites; at home via cable TV; or on closed-circuit systems at Phoenix-area corporations.

# College of Engineering and Applied Sciences

# 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 Science in Engineering, the M.S. in the fields of engineering and computer science, the Master of Computer Science, the M.S. degree in Construction, 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, Bio, and Materials Engineering Department of Civil and Environmental Engineering Department of Computer Science and Engineering Department of Electrical Engineering

Department of Industrial and Management Systems Engineering

Department of Mechanical and Aerospace Engineering

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 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 or by e-mail at asuengr@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 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, biotechnology, computer design, computer-integrated manufacturing, 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 systems. The research activities of the academic units within the college are complemented and supported by the work of centers for research and development.

The Center for Low Power Electronics has the following areas of technical focus:

- 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.

Faculty and graduate students in the college participate in programs of the Center for Solid-State Electronics Research, coordinating the work of researchers from various units. The center emphasizes the development of solid-state electronics research and teaching and facilitates interaction

Major	Degree	Administered by
School of Engineering		
Aerospace Engineering	M.S., M.S.E., Ph.D.	Department of Mechanical and Aerospace Engineering
Bioengineering Chemical Engineering Concentrations: biomedical and clinical engineering, chemical process engineering, chemical reactor engineering, energy and materials conversion, environmental control, solid-state processing, transport phenomena	M.S., Ph.D. M.S., M.S.E., Ph.D.	Department of Chemical, Bio, and Materials Engineering Department of Chemical, Bio, 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.	Tri-University Coordinating Board (ASU, NAU, UA) <sup>1</sup>
Engineering Science	M.S., M.S.E., Ph.D.	School of Engineering
Industrial Engineering	M.S., M.S.E., Ph.D.	Department of Industrial and Management Systems Engineering
Mechanical Engineering	M.S., M.S.E., Ph.D.	Department of Mechanical and Aerospace Engineering
Science and Engineering of Materials Concentrations: high-resolution, nanostructure analysis, solid-state device materials design	Ph.D. <sup>2</sup>	Committee on the Science and Engineering of Materials
<b>Del E. Webb School of Construction</b> Construction Concentrations: construction science, facilities, management	M.S.	Del E. Webb School of Construction

**College of Engineering and Applied Sciences Graduate Degrees and Majors** 

<sup>1</sup> This is a collaborative program offered by the three state universities.

<sup>2</sup> This program is administered by the Graduate College. See page "Graduate College," page 53.

with the electronics industry. The center operates modern, sophisticated research facilities, organizes colloquia and symposia, collaborates with external researchers, and sponsors visiting professorships.

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 graduatelevel 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'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 Manufacturing Institute was established to broaden the scope of manufacturing research in the university to include research at the interface between the College 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 Systems Science and Engineering is jointly sponsored by the College of Engineering and Applied Sciences and the College of Liberal Arts and Sciences. Its main goals are the creation and enhancement of interdisciplinary and cooperative research, graduate education, and public service programs in the areas of systems science, applied mathematics, and computation. The center's focal areas include nonlinear and adaptive systems, large scale systems, and scientific computing and simulation.

The purpose of the Center for Innovation in Engineering Education is to promote and encourage visionary approaches to educating engineering students by supporting the research, development, and assessment of new educational paradigms, unique curricula, improved courses, and new delivery systems that embrace a range of learning models, alternative classroom management strategies, improved pedagogies, and advanced educational technologies. The center also develops and offers workshops and seminars to encourage wide-scale implementation of those approaches that are shown to be effective in developing the attributes that will be needed by engineering graduates in the decade ahead.

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

- 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
- 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 instruction and the college's research programs. Currently, the School of Engineering, which houses the college's six engineering departments, is emphasizing research in the areas of semiconductor electronics, 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 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 Science in Engineering," page 182, visit the program's Web site at triuniv.engr.arizona.edu, contact the College of Engineering and Applied Sciences at 480/965-1726, or email at m.eng@asu.edu.

#### **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 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 SPARCenter 2000 superserver and Hewlett Packard 9000 superserver. 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, PCs, and Macintoshes accessing UNIX, Novell, or NT servers available for research or 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 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.

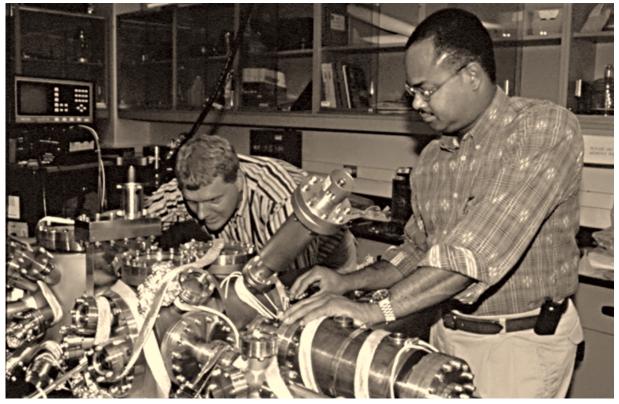
- A student is placed on academic probation if
- 1. the student's GPA falls below 3.00 in the approved program of study;
- 2. the student's overall GPA for all postbaccalaureate courses taken at ASU falls below 3.00;
- 3. the student receives a "D" or "E" in a required deficiency or in a course at the 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

 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.



Science and Engineering of Materials student John Edwards, right, and research scientist Peter Fuchs use a scanning tunneling microscope to study a new phase on a silicon surface.

# J. Robert Wills, Ph.D.

#### Dean

#### PURPOSE

The College of Fine Arts 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 of Fine Arts 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 into the 21st century.

#### ORGANIZATION

The College of Fine Arts houses the School of Art, the Department of Dance, the School of Music, the Department of Theatre, the University 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.

#### 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.

#### SPECIAL PROGRAMS

Together with faculty, visiting scholars, and artists-in-residence, graduate students in all fields of the College of Fine Arts 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 opportunities to explore and refine a new artistic medium: computer graphics. Students may work with software for "painting," solid modeling, animated solid modeling, and live video mapping. While computer graphics makes use of the latest technology, other areas preserve and revitalize established media. The neon studio contributes to the revival of interest in neon as an artistic medium and trains students in this difficult craft. The Northlight Gallery has also become known internationally for photographic exhibitions. Graduate students gain valuable experience in the gallery.

In addition, the School of Art has three traveling fellowships that allow students to study or conduct research abroad. The Anthony Gully Travel Fellowship and the Rabiner Memorial Fellowship are for Art History students. The Nathan Cummings Travel Fellowship is for M.F.A. 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. The department recently was selected to host the National Festival, which produced seven concerts and over 50 master classes in four days.

As the research center for the College of Fine Arts, 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 performing artists to reinvigorate the classics, develop new works, explore new theatrical forms, and discover changing

#### **College of Fine Arts Graduate Degrees and Majors**

Major	Degree	Administered by
Art	M.A.	School of Art
Concentrations: art education, art history		
Art	M.F.A.	School of Art
Concentrations: ceramics, drawing, fibers, intermedia, metals, painting, photographic studies, photography, printmaking, sculpture, wood		
Composition	M.M.	School of Music
Creative Writing	M.F.A.*	Creative Writing Committee
Dance	M.F.A.	Department of Dance
History and Theory of Art	Ph.D.	School of Art
Music	D.M.A.	School of Music
Concentrations: choral conducting, music education, music composition, solo performance (instrumental, keyboard, voice)		
Music in Education	M.M.	School of Music
Concentrations: choral music, general music, instrumental music, jazz studies		
Performance	M.M.	School of Music
Concentrations: music theatre musical direction, music theatre performance,		
performance pedagogy, piano accompanying,		
solo performance (instrumental, keyboard, voice)		
Theatre	M.A.	Department of Theatre
Theatre	M.F.A.	Department of Theatre
Concentrations: performance, scenography, theatre for youth		
Theatre	Ph.D.	Department of Theatre
Concentration: theatre for youth		

\* This program is administered by the Graduate College. See "Graduate College," page 53.

relationships between art and technology. The Ph.D. in Theatre program offers a concentration in theatre for youth.

The Department of Theatre, with its strong playwriting program, has a special interest in new scripts that bring a wealth of professional productions and workshops to campus for the benefit of all students. 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. Students also help organize a biennial Youth Arts Festival that brings many multitalented artists and thousands of young people to 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.

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. A multiethnic theatre program provides opportunities for students to view and work with professional and semiprofessional multiethnic productions on campus.

The playwriting program enriches graduate study and brings together talented students with those who practice the theatrical arts.

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 University Art Museum; the 496-seat Paul V. Galvin Playhouse; six theatre studios; a 7,000-square-foot Experimental Dance Lab; 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 175seat 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 University 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 32.

#### 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 and the Department of Theatre hold formal memberships; the School of Music by the National Association of Schools of Music, and the Department of Theatre by the National Association of Schools of Theatre.



ASU Nelson Fine Arts Center

Tim Trumble photo

# Patricia D. White, J.D.

#### Dean

#### PURPOSE

The College of Law educates students to assume various societal roles in government, legal aid and public defender offices, law enforcement, business, education, and the many other avenues opened by legal training. Some students, while still in school, develop programs of study that involve fields and disciplines outside the law in its conventional sense.

Students of the College of Law develop an understanding, through formal course work and clinical experience, of the tremendous responsibilities of the legal profession to society, and experience the satisfaction that comes from discharging, at a high standard, the duties of counselor and advocate. In addition, the college has a responsibility to contribute to the quality of justice administered in society through research and service to the community.

#### ORGANIZATION

The College of Law offers a broad general curriculum supported by three leadership programs and an outstanding faculty of scholar-teachers with expertise in areas ranging from jurisprudence to advances in scientific evidence. Law school faculty maintain one of the most productive records of scholarship, research, and publication of any public law program in the nation.

The uniquely designed John S. Armstrong Hall building includes: classrooms and seminar rooms; the Clinical Programs offices; Student Services offices; a Career Planning Resource Center; the Willard H. Pedrick Great Hall, a fullbench setting that seats 400; a classroom equipped with a computer projection unit, broadband capability, VCR, sound system, and infrared system for the hearing impaired; a trial courtroom; and informal student lounges. The mezzanine level houses faculty, staff, and administrative offices.

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 with a collection of more than 310,000 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 growing special collections in the areas of international law, Indian law, Mexican law, and law and technology. In addition, the library has a 20-station computer lab as well as LEXIS and WESTLAW rooms each containing 10 stations, 27 meeting and study rooms, a microforms facility and a classroom. The library is also a selective U.S. government depository.

Students 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 of the university's 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.).

#### **Dual/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 prior to pursuing the joint degree.

#### ADMISSION REQUIREMENTS

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 Domicile Affidavit if claiming Arizona residency;
- 3. a \$45 application fee;
- 4. a personal statement that does not exceed three typed pages in length; and
- 5. a Law School Data Assembly Service (LSDAS) report with all transcripts and the Law School Admissions Test (LSAT) score(s) from the Law School Admission Services (LSAS).

To be assured consideration, all application materials must be complete by March 1.

### SPECIAL PROGRAMS

# Center for the Study of Law, Science, and Technology

The Center for the Study of Law, Science, and Technology is a multidisciplinary research center created 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 the formulation and improvement of law and public policy affecting science and technology and to 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 do both editorial work on submitted articles and original writing for publication in the journal.

#### Indian Legal Program

The College of Law offers an Indian Legal Program whose missions are to assist tribal courts and governments in improving justice in Indian country and to develop education and scholarship in Indian law. Students have the opportunity to participate in all phases of the Indian Legal Program and gain 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 Tribal Court dispute resolution, economic development, American Indian cultural resources protection, and tribal environmental law are part of the curriculum. Students may also participate in externships with the local tribal courts or spend a semester in Washington, D.C., working with the Senate Select Committee on Indian Affairs. This variety of academic and work experience provides the students an outstanding legal education with 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 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.

#### 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.



ASU Law Library

# College of Liberal Arts and Sciences

# Gary S. Krahenbuhl, Ed.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 crossdisciplinary 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 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, 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 faculty participate in the interdisciplinary M.S. degree in Statistics (with College of Business faculty);

members of the Departments of Biology, Chemistry and Biochemistry, Microbiology, and Plant Biology 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 Resources 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.

#### **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 89). 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 is characterized by the development of program thrusts in new areas, many of which are interdisciplinary in content. There is special strength, for example, in planetary geology, as well as in more traditional geological subdisciplines; 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.

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Major	Degree	Administered by
Anthropology Concentrations: archaeology, bioarchaeology, linguistics, medical anthropology, museum studies, physical anthropology, social-cultural anthropology	M.A.	Department of Anthropology
Anthropology Concentrations: archaeology, physical anthropology, social-cultural anthropology	Ph.D.	Department of Anthropology
Biology <sup>1</sup> Concentration: ecology	M.S., Ph.D.	Department of Biology
Chemistry Concentrations: analytical chemistry, biochemistry, geochemistry, inorganic chemistry, organic chemistry, physical chemistry, solid-state chemistry	M.S., Ph.D.	Department of Chemistry and Biochemistry
Communication Disorders	M.S.	Department of Speech and Hearing Science
Creative Writing	$M.F.A.^2$	Creative Writing Committee
English Concentrations: comparative literature, English linguistics, literature and language, rhetoric and composition	M.A.	Department of English
English Concentrations: literature, rhetoric/ composition and linguistics	Ph.D. <sup>2</sup>	Department of English
Exercise Science Concentrations: biomechanics, motor behavior/sport psychology, physiology of exercise	M.S.	Department of Exercise Science
Exercise Science/Physical Education Family Resources and Human Development Concentrations: family studies, general family resources and human development	M.S. M.S.	Department of Exercise Science and Physical Education Department of Family Resources and Human Development
Family Science <sup>1</sup> Concentration: marriage and family therapy	Ph.D.	Department of Family Resources and Human Development
French Concentrations: comparative literature, language and culture, literature	M.A.	Department of Languages and Literatures
Geography	M.A., Ph.D.	Department of Geography
Geology German Concentrations: comparative literature, language and culture, literature	M.S., Ph.D. M.A.	Department of Geology Department of Languages and Literatures
History Concentrations: Asian history, British history, European history, Latin American history, public history, U.S. history, U.S. Western history	M.A.	Department of History
Humanities	M.A.	Graduate Committee on Humanities
Mathematics	M.A., Ph.D.	Department of Mathematics
Microbiology Molecular and Cellular Biology	M.S., Ph.D. M.S., Ph.D.	Department of Microbiology Interdisciplinary Committee on Molecular and Cellular Biology

#### College of Liberal Arts and Sciences Graduate Degrees and Majors

Major with formalized concentration(s); other areas of study are available.
<sup>2</sup> This program is administered by the Graduate College. See "Graduate College," page 53.

Major	Degree	Administered by
Natural Science	M.N.S.	
Concentrations:		
Biology		Department of Biology
Chemistry		Department of Chemistry and Biochemistry
Geology		Department of Geology
Mathematics		Department of Mathematics
Microbiology		Department of Microbiology
Physics		Department of Physics and Astronomy
Plant Biology		Department of Plant Biology
Philosophy	M.A., Ph.D.	Department of Philosophy
Physical Education	M.P.E.	Department of Exercise Science and Physical Education
Physics	M.S., Ph.D.	Department of Physics and Astronomy
Plant Biology <sup>1</sup>	M.S., Ph.D.	Department of Plant Biology
Concentrations: ecology, photosynthesis		1
Political Science	M.A., Ph.D.	Department of Political Science
Concentrations: American politics, comparative politics, international	,	
relations, political theory		
Psychology Concentrations: behavioral neuroscience, clinical psychology, cognitive/behavioral systems, developmental psychology, environmental psychology, quantitative research methods, social psychology	Ph.D.	Department of Psychology
Religious Studies	M.A.	Department of Religious Studies
Science and Engineering of Materials Concentrations: high-resolution nanostructure analysis, solid-state device materials design	Ph.D. <sup>2</sup>	Committee on the Science and Engineering of Materials
Sociology	M.A., Ph.D.	Department of Sociology
Spanish	M.A.	Department of Languages and Literatures
Concentrations: comparative literature,		1 0 0
language and culture, linguistics, literature		
Spanish	M.A.	Department of Languages and Literatures
Speech and Hearing Science Concentrations: developmental neurolinguistic disorders, neuroauditory processes, neurogerontologic communication disorders	Ph.D. <sup>2</sup>	Committee on Speech and Hearing Science
Statistics	M.S. <sup>2</sup>	Committee on Statistics
Teaching English as a Second Language	M.TESL	Department of English

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

<sup>1</sup> Major with formalized concentration(s); other areas of study are available.

<sup>2</sup> This program is administered by the Graduate College. See "Graduate College," page 53.

The Southwest environment has favorably affected program development in several ways, ranging from research activities in water resources, archaeology, and fluvial geomorphology to distinguished programs in Hispanic 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, like 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 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 32.

#### 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.



The arboretum at ASU offers abundant shade for the ASU Main Campus.

Tim Trumble photo

# **College of Nursing**

# Barbara A. Durand, Ed.D.

Dean

#### PURPOSE

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

- 1. understand and respond to changing health and social needs and services,
- influence nursing practice and health care through leadership and participation in professional and sociopolitical activities, and
- 3. utilize scientific knowledge to advance professional nursing practice.

The continuing education program provides opportunities for nurses to improve 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, 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.

#### **GRADUATE PROGRAM**

The graduate curriculum leads to the M.S. 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 and beginning researchers. The program offers advanced-level courses that can be used as a base for doctoral study and for functional role development in teaching, management, or practice as a nurse practitioner.

Students may select one area of concentration from the following offerings:

Adult health nursing Community health nursing Community mental health/psychiatric nursing Nursing administration Parent-child nursing (options include childbearing family and nursing of children)

The curriculum also provides elective study in teaching, management, and practitioner roles, including adult, child, family, psychiatric, and women's health nurse practitioner roles.

A post-master's Family Nurse Practitioner Certificate is available.

A student may concurrently pursue the M.S. degree in Nursing (nursing administration concentration) and the Master of Health Services Administration (College of Business).

#### SPECIAL PROGRAMS AND SERVICES

**Continuing Education Program.** This program presents a variety of noncredit offerings on the main campus, 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 advising, 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.

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, or the associate dean for graduate programs and research.

**College Council of Nursing Students.** The council is a member of ASASU (Associate Students of Arizona State University) and serves as the governing body of all student activities in the college. The College Council of Nursing 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.** 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 240 agencies in the Phoenix metropolitan area and also operates a unique nurse-managed clinic in a community setting.

**Computer Facilities.** Computers are available for student use in the Learning Resource Center of the college. Also refer to "Computing Facilities and Services," page 32.

#### 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.

### 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. 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.



Nursing student Jane Brady, right, reviews a health outcome report with Associate Professor Patricia Moore.

Tim Trumble photo

# **College of Public Programs**

## 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 six academic units: the Department of Communication, the Walter Cronkite School of Journalism and Telecommunication, the Department of Recreation Management and Tourism, the School of Public Affairs, the School of Justice Studies, and the School of Social Work. Each academic unit is administered by a chair or director.

**Department of Communication.** The faculty in the Department of 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 Department of 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 Telecommunication. The faculty in the Walter Cronkite School of Journalism and Telecommunication 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 critically analyze topics and issues related to the recreation and tourism fields. 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 in one of four general concentration areas: outdoor recreation, recreation administration, social/psychological aspects of leisure, and tourism and commercial recreation.

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 in the evenings 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 Doctor of Public Administration program under the auspices of the Graduate College. 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.

Faculty in the School of Justice Studies also participate in offering the Doctor of Public Administration degree. The school 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 (B.S.W., M.S.W., and Ph.D.). The mission and 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 and the understanding of social issues; and public/community service. Central to the mission of the school is the emphasis on an 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, page 87, are offered by the faculty within the college.

Major	Degree	Administered by
Communication	M.A.	Department of Communication
Communication	Ph.D.	Department of Communication
Concentrations: communicative development,		
intercultural communication, organizational		
communication		
Justice Studies	M.S. <sup>1</sup>	School of Justice Studies
Justice Studies	$Ph.D.^2$	Committee on Law and Social Sciences
Concentrations: criminal and juvenile justice;		
dispute resolution; law, justice, and minority		
population; law, policy, and evaluation;		
women, law, and justice		
Justice Studies	J.D./Ph.D. <sup>3</sup>	Committee on Law and Social Sciences/College of Law
Mass Communication	M.M.C.	Walter Cronkite School of Journalism and Telecommunication
Public Administration	M.P.A.	School of Public Affairs
Concentrations: public information management,		
public management, public policy analysis and		
evaluation, urban management and planning		
Public Administration	D.P.A. <sup>2</sup>	Committee on Public Administration
Recreation	M.S.	Department of Recreation Management and
Concentrations: outdoor recreation, recreation administration, social/psychological aspects of		Tourism
leisure, and tourism and commercial recreation.		
Social Work	M.S.W., Ph.D.	School of Social Work

#### College of Public Programs Graduate Degrees and Majors

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

<sup>2</sup> This program is administered by the Graduate College. See "Graduate College," page 53.

<sup>3</sup> Ph.D. students in Justice Studies are able to acquire a joint J.D./Ph.D. with concurrent admission to the College of Law at ASU and fulfillment of joint requirements.

One of the unique features of an interdisciplinary program is that, because it uses faculty research and teaching interests from a number of academic units, a student 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 prepare individuals with combined, complementary knowledge and skills for basic and applied research, and 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 education 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 32.

Broadcast laboratories within the School of Journalism and Telecommunication have the latest in-studio and ENG-EEP equipment, and provide facilities for performance, writing, and the other necessary broadcast 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 Telecommunication 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.



Reflection of the sun in one of the university's many fountains and pools

Tim Trumble photo