

# General Information

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## MISSION

Arizona State University has emerged as a leading national and international research and teaching institution with a primary focus on Maricopa County, Arizona's dominant population center. This rapidly growing, multicampus public research university offers programs from the baccalaureate through the doctorate for approximately 49,000 full-time and part-time students through ASU Main in Tempe; ASU West in northwest Phoenix; a major educational center in downtown Phoenix; ASU East, located at the Williams Campus (formerly Williams Air Force Base) in southwest Mesa; and other instructional, research, and public service sites throughout Maricopa County. ASU is a modern university that applies its research capabilities to the rapidly evolving needs of Maricopa County and the state.

Arizona State University's goal is to become a world-class university in a multicampus setting, one of the very best public universities in the nation. Its mission is to provide outstanding programs in instruction, research, and creative activity, to promote and support economic development, and to provide service appropriate for the nation, the state of Arizona, and the state's major metropolitan area. To fulfill its mission, ASU places special emphasis on the core disciplines and offers a full range of degree programs—baccalaureate through doctorate. To become competitive with the very best public universities, ASU recognizes that it must offer quality programs at all degree levels in a broad range of fundamental fields of inquiry. ASU will continue to dedicate itself to superior instruction; to excellent student performance; to original research, creative endeavor, and scholarly achievement; and to outstanding public service and economic development activities. As a result of this dedication, ASU was awarded the prestigious Research I university status in 1994, recognizing ASU as a premier research institution.

## ORGANIZATION

Arizona State University is part of a university system governed by the Arizona Board of Regents, a body with perpetual succession under the constitution and laws of Arizona. The board consists of eight citizens appointed by the governor of the state for terms of eight years, and one student regent serving for one year with the elected governor and state superintendent of public instruction as members ex officio.

The regents select and appoint the president of the university, who is the liaison between the Arizona Board of Regents and the institution. The president is aided in the administrative work of the institution by the senior vice president and provost, other provosts, vice presidents, deans, directors, department chairs, faculty, and other officers. Refer to "ASU Main Academic Administration," page 9, and "Administrative Personnel," page 369.

The academic units develop and implement the teaching, research, and service programs of the university, aided by the university libraries, museums, and other services.

The faculty and students of the university play an important role in educational policy, with an Academic Senate,

joint university committees and boards, and the Associated Students serving the needs of a large institution.

## EQUAL OPPORTUNITY AND AFFIRMATIVE ACTION

It is the policy of ASU to provide equal opportunity through affirmative action in employment and educational programs and activities. Discrimination is prohibited on the basis of race, color, religion, national origin, citizenship, sex, sexual orientation, age, disability, special disabled veteran or Vietnam-era veteran status. Equal employment opportunity includes but is not limited to recruitment, hiring, promotion, termination, compensation, benefits, transfers, university-sponsored training, education, tuition assistance, and social and recreational programs.

ASU is committed to taking affirmative action in increasing opportunities at all levels of employment and to increasing participation in programs and activities by all faculty, staff, and students. Affirmative action is directed toward minority persons, women, special disabled veterans, Vietnam-era veterans, and persons with disabilities.

## University Policy Prohibiting Discriminatory Harassment

**Harassment Prohibited.** Subject to the limiting provisions of "Freedom of Speech and Academic Freedom" specified below, it is a violation of university policy for any university employee or student to subject any person to harassment on university property or at a university-sponsored activity.

**Harassment Defined.** Actions constitute harassment if (1) they substantially interfere with another's educational or employment opportunities, peaceful enjoyment of residence, physical security, and (2) they are taken with a general intent to engage in the actions and with the knowledge that the actions are likely to substantially interfere with a protected interest identified above. Such intent and knowledge may be inferred from all the circumstances.

**Freedom of Speech and Academic Freedom.** Neither this nor any other university policy is violated by actions that amount to expression protected by the state or federal constitutions or by related principles of academic freedom. This limitation is further described in the ASU First Amendment Guidelines, the current version of which supplements this policy and is available in the Office of the General Counsel.

**Relationship to the Work of the Campus Environment Team.** If harassment is discriminatory, it falls within the education, monitoring, reporting, and referral functions of the Campus Environment Team. Harassment is discriminatory if taken with the purpose or effect of differentiating on the basis of another person's race, sex, color, national origin, religion, age, sexual orientation, disability, or Vietnam-era veteran status.

## INTERGROUP RELATIONS CENTER

The Intergroup Relations Center provides opportunities for students, faculty, and staff to get involved in programs,

workshops, activities, and events designed to educate about and improve relations among many different groups at ASU. The center is well-known for presenting programs and workshops that are innovative, nondefensive, and educational and that are inclusive of many groups.

The center sponsors the Voices of Discovery Program, which consists of more than 10 small intergroup dialogues between different student groups. Examples of the different groups include a Latino/white dialogue group; an African American/white group; a female/male group; an American Indian/white group; a heterosexual/gay, lesbian, bisexual group; a Jewish/Christian dialogue group; an Asian/white group; and a persons with disabilities/able-bodied group. Each group meets for two hours per week for six weeks to have discussions about race, ethnicity, class, gender, sexual orientation, and other intergroup issues all designed to increase understanding and relations between groups. Students receive credit through courses for participating in the program.

The center also sponsors Leadership 2000, a four-day training retreat that takes place once a year and involves about 80 ASU students from many backgrounds. Leadership 2000 takes place in the mountains near Prescott, Arizona, and trains students to understand and address issues of leadership, culture, cross-cultural communication, stereotyping, intergroup cooperation and friendship, identity development, prejudice, and discrimination.

## HISTORY OF ARIZONA STATE UNIVERSITY

On February 26, 1885, House Bill 164, "An Act to Establish a Normal School in the Territory of Arizona," was introduced in the 13th Legislative Assembly of Arizona Territory by John Samuel Armstrong. The bill, strongly supported by Charles Trumbull Hayden of Tempe, passed the House on March 6 and the Council on March 11 and was signed by Governor F.A. Tritle on March 12, 1885, thereby founding the institution known today as Arizona State University. Under the supervision of Principal Hiram Bradford Farmer, instruction was instituted on February 8, 1886, when 33 students met in a single room on land donated by George and Martha Wilson of Tempe.

The institution began with the broad obligation to provide "instruction of persons...in the art of teaching and in all the various branches that pertain to good common school education; also, to give instruction in the mechanical arts and in husbandry and agricultural chemistry, the fundamental law of the United States, and in what regards the rights and duties of citizens."

With the growth of the state, especially the surrounding Phoenix metropolitan area, the school has carried forward this charter, accompanied by successive changes in scope, name, and governance.

**The Early Years.** For the first 14 years, the school was governed by six principals. At the turn of the century and with another new name, Normal School of Arizona, President Arthur John Matthews brought a 30-year tenure of progress to the school.

He assisted in changing the school to an all-college student status; the Normal School had enlisted high school students who had no other secondary educational facilities in Arizona. He embarked on a building schedule that included the state's first dormitories. Of the 18 buildings constructed while Matthews was president, six are still in use. His leg-

acy of an "evergreen campus," with the import of many shrubs and trees and the planting of Palm Walk, continues to this day: the main campus is a nationally recognized arboretum.

Matthews also saw to it that the Normal School was accredited outside the state. His service on national education organization boards was conducive to this recognition. The school remained a teacher's college in fact and theory during Matthews' tenure, although the struggle to attain status as a university was ongoing.

An extraordinary event occurred March 20, 1911, when former President Theodore Roosevelt visited the Tempe school and spoke from the steps of Old Main. He had dedicated the Roosevelt Dam the day before and was impressed with Arizona. He noted that construction of the dam would benefit central Arizona's growth and that of the Normal School. It would be another year before the territory became a state.

During the Great Depression, Ralph W. Swetman was hired as president for a three-year term. This was a time of uncertainty for educational institutions. Although enrollment increased due to the depression, many faculty were terminated and faculty salaries were cut. The North Central Association became the accrediting agency for Arizona State Teachers College.

**The Gammage Years.** In 1933, Grady Gammage, then president of Arizona State Teachers College at Flagstaff, became president of Arizona State Teachers College at Tempe, a tenure that would last for nearly 28 years.

The Graduate Division was created in 1937 and the first master's program was established the same year.

On March 8, 1945, the three state institutions of higher learning came under the authority of one Arizona Board of Regents, which oversees ASU today.

The phenomenal growth of the college began after the end of World War II. Dr. Gammage had foreseen that the G.I. Bill of Rights would flood campuses everywhere with returning veterans. Many of the veterans who had received military training in Arizona had fallen in love with the state and vowed to return after the war. The numbers within one year were staggering: in the fall semester of 1945, 553 students were enrolled; over the weekend semester break in January 1946, enrollment increased 110 percent to 1,163 students. Successive semesters saw continuing increased enrollment.

Like his predecessor, Dr. Gammage oversaw the construction of a number of buildings. His greatest dream, that of a great auditorium, came five years after his death. He laid the groundwork for it with Frank Lloyd Wright, who designed what is now the university's hallmark building, Grady Gammage Memorial Auditorium, built in 1964.

**Years of Growth and Stature.** During the 1960s, with the presidency of Dr. G. Homer Durham, Arizona State University began its academic rise with the establishment of several new colleges (the College of Fine Arts, the College of Law, the College of Nursing, and the School of Social Work) and the reorganization of what became the College of Liberal Arts and Sciences and the College of Engineering and Applied Sciences. Perhaps most important, the university gained the authority to award the Doctor of Philosophy and other doctoral degrees.

The next three presidents—Harry K. Newburn, 1969–71, John W. Schwada, 1971–81, and J. Russell Nelson, 1981–

89—and Interim President Richard Peck, 1989, led the university to increased academic stature, expansion of the campuses, and rising enrollment. With approximately 49,000 students, ASU is the fourth largest university in the nation.

On January 1, 1990, Dr. Lattie F. Coor, a native Arizonan, became 15th in the institution's succession of principals and presidents. He has highlighted undergraduate education, research, cultural diversity, and economic development as the "four pillars" of the university's agenda. He has taken steps in these areas by further defining the role of ASU West and by initiating the establishment of ASU East.

In 1996, "The University for the Next Century" initiative, involving campus and community members, developed a set of general goals to guide the university at the turn of the millennium. By making selective investments in people, programs, and new practices, ASU will be a prototype of the major metropolitan research university of the future that is technologically sophisticated in linking its students, faculty, staff, and alumni to the larger issues of society.

**Research I Status.** ASU was named a Research I university by the Carnegie Foundation for the Advancement of Teaching in early 1994. Nationally, 88 universities have been granted this status, indicating successful garnering of support for research projects and educating future scientists.

### Athletics

The original nickname for the Normal School of Arizona athletic teams was the Owls. Athletics other than Sunday hikes and lawn tennis were not part of the early curriculum.

During President Matthews' tenure, some team competition began. The Tempe Bulldogs saw some interesting and rough competition with the University of Arizona Wildcats. In the 1940s, the college's teams became the Sun Devils.

In 1979, the university joined the Pacific-10 Conference. In 1987, ASU became the first Arizona football team to play in the Rose Bowl, defeating the University of Michigan Wolverines 22-15. ASU made its second appearance in 1997 against Ohio State.

In 1998 ASU finished 12th nationally in the Sears Directors' Cup, which recognizes the top athletic programs in the country. The women's golf team won its fifth NCAA championship in six years in 1998. Also in 1998, the ASU baseball team reached the College World Series Championship Game for the 10th time in its history.

### Graduate College

Graduate education at ASU began with the creation of the Graduate Division in 1937 and the establishment of the first master's program the same year. For the first 20 years, graduate education focused exclusively on professional programs in education. During the 1950s as the campus grew and broadened its mission, a number of new degree programs appeared, significantly enhancing the role of graduate studies on the campus. By the early 1960s, graduate programs were established in many disciplines; humanities, social science, and science fields were well represented, as were professional programs in business, engineering, fine arts, and public administration. With this expansion of the mission of the campus came new facilities and the development of a wider range of research interests and activities.

Major changes in the nature and role of graduate education came in the early 1960s when the first Ph.D. programs were established in chemistry, education, engineering, English, physics, and psychology. The research focus of

campus programs grew at a rapid pace. Master's programs matured as doctoral programs were added. From the late 1960s to the present, campus facilities for instruction, research, and advanced study significantly expanded to support university programs with the construction of new laboratories, classroom structures, and two large libraries—including a new main library and a separate science and engineering library.

### UNIVERSITY CAMPUSES AND SITES

**ASU Main.** ASU Main is located near the heart of metropolitan Phoenix in the city of Tempe (population 160,000). Nearby are the municipalities that make up the fast-growing Valley of the Sun: Chandler, Gilbert, Glendale, Mesa, Scottsdale, and other communities.

ASU Main comprises more than 700 acres and offers outstanding physical facilities to support the university's educational programs. Buildings are modern and attractively designed.

Broad pedestrian malls laid out in an easy-to-follow grid plan, bicycle lanes connecting all parts of the university, and spacious lawns and subtropical landscaping characterize a campus serving the physical, aesthetic, and educational needs of students, faculty, and staff.

**ASU East.** The university's third campus, ASU East, opened at the Williams Campus in the fall of 1996. Approximately 1,100 students are enrolled in degree programs offered by the College of Technology and Applied Sciences and Morrison School of Agribusiness and Resource Management, programs offered at no other Arizona campus. In 1997, East College was created to provide support courses for existing programs and to generate new degree programs at ASU East.

ASU East has joined with Chandler-Gilbert Community College (CGCC) in the New Partnership in Baccalaureate Education that allows students to graduate in four years with an ASU baccalaureate degree earned entirely at the Williams Campus, at some savings in tuition.

The campus includes excellent educational facilities and unique residential opportunities, including a choice of traditional residence halls or two- to five-bedroom homes.

ASU East is a student-centered campus that offers many of the features of a small college in a rural area while providing access to the resources of a major research university and the amenities of a large metropolitan area. A shuttle service provides transportation between ASU East and ASU Main. The 600-acre ASU East campus is easily accessible via major interstate routes. For more information, see "ASU East," page 375.

**ASU West.** ASU West is a campus of Arizona State University that offers upper-division undergraduate and graduate programs in the arts and sciences and in selected professional fields. It is located in northwest Phoenix to serve the higher educational needs of residents of western Maricopa County. As a comprehensive campus, the institution is developing a broad spectrum of professional and academic programs that share a liberal arts foundation and an interdisciplinary emphasis.

The campus is located between 43rd and 51st Avenues on West Thunderbird Road in Phoenix. Immediately west of the campus is the city of Glendale. The core campus was completed in March 1991 and includes the Fletcher Library,

the Sands Classroom Building, the Laboratory/Computer Classroom Building, the Faculty and Administration Building, Kiva Lecture Hall, and the University Center Building.

For more information, see "ASU West," page 384. For complete information and course listings, see the *ASU West 1999–2000 Catalog*.

**ASU Extended Campus.** The ASU Extended Campus ([www.asu.edu/xed](http://www.asu.edu/xed)) goes beyond the boundaries of the university's three physical campuses to provide access to academic credit and degree programs for working adults through flexible schedules; a vast network of off-campus sites; classes scheduled days, evenings, and weekends; plus innovative delivery technologies, including television, the Internet, and independent learning. The Extended Campus offers programs in partnership with the campuses and colleges of ASU, including a variety of professional continuing education programs. The ASU Downtown Center is the anchor location of the Extended Campus. Lifelong learning opportunities are offered to students of all ages throughout Maricopa County and the state of Arizona through the Extended Campus.

*ASU Downtown Center.* Located in downtown Phoenix, 502 E. Monroe, the ASU Downtown Center offers a variety of daytime and evening courses of interest to employees in private businesses and government agencies and to individuals seeking personal growth and enrichment. These courses are scheduled at a variety of convenient times and offered through various modes of delivery. In addition, computer technology classes are taught during daytime, evening, and weekend hours, and computer certificates are offered. Professional continuing education, certificate programs and lecture series are also available. Access to ASU library information and resources, the ASU mainframe, and the Internet is available through the center's computer lab.

**ASU Research Park.** The mission of the ASU Research Park ([www.asu.edu/researchpark](http://www.asu.edu/researchpark)) is to enhance Arizona's high value research-based economic development and to build the university's capacity to educate and advance knowledge. To this end, the Research Park serves to attract to Arizona new corporate and regional headquarters and research and development firms that broaden the base for potential research among ASU departments, interact with graduate students, consult with university faculty, cosponsor seminars on research topics, and provide employment opportunities for graduates of ASU.

The Research Park has major tenants, including ASM Lithography, CytecFiberite, Iridium North America, Motorola Flat Panel Display, Motorola University, National Association of Purchasing Management, PKS Information Services, VLSI, and Walgreens Healthcare Plus. There is also a 50,000-square-foot multitenant building developed by Transamerica Corporation, and the Lakeside Technology Center, a 44,000-square-foot multitenant building developed by Price-Elliott Research Park, Inc. The Research Park contributes to ASU's standing as a major research university.

**Camp Tontozona.** Located in the famed Mogollon Rim country near Kohl's Ranch, northeast of Payson, this continuing education facility of the university serves the needs of academic departments conducting teaching and research in mountain terrain. The camp is also available to faculty, staff, graduate students, and alumni for family use. For more information, call 480/965-6851.

**Deer Valley Rock Art Center.** Deer Valley Rock Art Center, located two miles west of the Black Canyon Freeway on Deer Valley Road, is operated by the ASU Department of Anthropology in consultation with the Hopi, Yavapai, and Gila River Indian tribes. It includes more than 1,500 petroglyphs that cover the eastern slope of Hedgpath Hills. For more information, call 480/582-8007.

**The Arboretum.** The Arboretum at Arizona State University is a flourishing oasis of plants from around the world. Dedicated on November 20, 1990, this virtual outdoor classroom includes 162 species/varieties of trees and 172 species/varieties of other woody ornamental and herbaceous plants from diverse geographic regions as well as the Sonoran Desert. It contains one of the best collections of palms and conifers in the desert Southwest and a growing collection of native Southwestern plants.

The Arboretum actually began with Arthur J. Matthews. By the time Matthews' 30-year reign as president was finished, nearly 1,500 trees of 57 varieties and more than 5,700 feet of hedges were planted. One of his most enduring landscape projects was the planting of Palm Walk in 1916, which extends from University Drive south to Orange Mall.

Several Arboretum walking tours are designated on campus, including the historic north campus tour, the green trail tour, and the red trail tour.

## UNIVERSITY LIBRARIES AND COLLECTIONS

The collections of the university's libraries comprise more than 3 million volumes, approximately 6.8 million microform units, and more than 36,000 periodical and serial subscriptions. Computer access to commercially and locally produced databases and the ability to borrow research materials from other libraries enhance local resources. ASU is a member of the Association of Research Libraries and the Center for Research Libraries.

For telephone numbers, see "Who to Contact at ASU Main," page 8.

**Charles Trumbull Hayden Library.** The Charles Trumbull Hayden Library, designed by Weaver and Drover in 1966, houses the largest multidisciplinary collection. In addition to the open stack areas, separate collections and service areas include Current Periodicals and Microforms; Government Documents; Interlibrary Loan and Document Delivery Services; Labriola National American Indian Data Center; Library Instruction, Systems, and Technology (L.I.S.T.); Reference; Reserve; Special Collections; and Archives and Manuscripts, which includes the Arizona Collection, the Chicano Research Collection, and the Visual Literacy Collection.

Specialized collections include comprehensive holdings of the Pre-Raphaelite period, a 14th-century manuscript on algebra, the child drama collection, the Thomas Mosher collection, the William S. Burroughs collection, and the papers of several major Arizona political figures.

**Architecture and Environmental Design Library.** The Architecture and Environmental Design Library, located in the College of Architecture and Environmental Design/ North building, contains books and periodicals pertinent to areas of study within the college. See "College Facilities," page 61, for more information.

**Arizona Historical Foundation Library.** Under a cooperative agreement with ASU, the Arizona Historical Foundation houses a library of several thousand volumes, manuscript collections, maps, and photographs, and a large collection of audio/visual materials. Housed in the Charles Trumbull Hayden Library, the collection's focus is on the history of Arizona and the Southwest.

**Fletcher Library.** Located at the ASU West campus, Fletcher Library utilizes a range of electronic systems, from compact discs to telecommunications networks, to provide access to resources and delivery of materials. Its holdings include more than 310,000 volumes, 3,000 serial subscriptions, and 1.4 million microfilms selected to complement ASU West course offerings.

**Law Library.** The John J. Ross-William C. Blakley Law Library is located on McAllister Avenue. See "Organization," page 60, for more information.

**Music Library.** A large collection of music scores, recordings, books, music reference materials, and listening facilities for individuals and groups are located on the third floor of the Music Building, West Wing.

**Daniel E. Noble Science and Engineering Library.** The Daniel E. Noble Science and Engineering Library houses books, journals, and microforms in the sciences and engineering, the Map Collection, and the U.S. Patent and Trademark Depository.

**University Archives.** The University Archives collection (1885–present) of university theses and dissertations, administrative records of the university, historical photographs and personal papers of faculty, staff, and alumni as well as student, faculty, and official university publications are available for use at the Luhrs Reading Room in Hayden Library. The historic University Archives Building on Tyler Mall is the home of the 1907 Gallery, which hosts exhibits of historical photographs from the collections of the Department of Archives and Manuscripts.

## PERFORMING AND FINE ARTS FACILITIES

**ASU Art Museum.** The ASU Art Museum serves students and scholars within and beyond the university and as a cultural resource for the Phoenix Metropolitan area. Additionally, the museum serves a public beyond the immediate area through traveling exhibitions and publications that not only document the exhibitions but also offer critical insight into the museum's areas of concentration.

Exhibitions, education programs, and publications are both interdisciplinary and educational and designed to engage viewers with art that is relevant to their lives. New technologies in the content of art and in the approaches to reaching new audiences are eagerly and openly adopted.

Collections and exhibitions focus on contemporary art, particularly new media and new methods of presentation; art by Latin American artists; art from the Southwest; prints, both historic and contemporary; and crafts, emphasizing American ceramics. The museum was founded by a gift of historic American paintings, which are on continuous display, including works by Gilbert Stuart, Albert Pinkham Ryder, Winslow Homer, Georgia O'Keeffe and Romare Bearden. The contemporary art holdings include works by Nam June Paik, Lorna Simpson, Vernon Fisher, Sue Coe,

and Enrique Chagoya. Exhibitions and collections are housed in galleries and study rooms in two facilities: the international award-winning Nelson Fine Arts Center and Matthews Center in the middle of campus.

Educational programs include artist residencies and dialogs with classes, student docent program, internships and research assistanceships, lectures and symposia, in-gallery materials, special curricula-based school programs, school and public tours. For information on upcoming exhibitions and programs, call 480/965-2787.

**Computing Commons Gallery.** One of the unique features of the Computing Commons building is an art gallery, located off the main lobby in the northwest corner of the building. The gallery has design features that are unique for showcasing technology-based artwork and displays. The Computing Commons gallery can support display of national online computer art networks (e.g., via Internet) and holographic displays, as well as more traditional two-dimensional graphic presentations. This is an exciting decade for the arts as new technology-based tools and techniques open new avenues for creativity, as demonstrated by the exhibits in the Computing Commons Gallery.

**Dance Studio Theatre.** Located in the Physical Education Building East, the Dance Studio Theatre is a 6,000-square-foot dance studio that also serves as a proscenium-style performance space. The 300-seat theatre is devoted to informal and formal showcases of student and faculty choreographic work.

**Drama City.** Housed in a 50-year-old former church, Drama City is the primary performance venue for the Institute for Studies in the Arts. The space is a black box, 60 by 30 feet with fixed lighting positions and flexible control stations. The area can seat up to 100 and is equipped for performance or installation pieces. The facility also houses a wide range of technology for performance and presentation including video projection, automated luminaires, and a unique computerized control system for integrated media usage.

**Gallery of Design.** Housed in the College of Architecture and Environmental Design, the Gallery of Design features traveling exhibitions on design and urban issues.

**Paul V. Galvin Playhouse.** Built to stage the largest productions of the ASU Theatre, the Paul V. Galvin Playhouse is a 496-seat proscenium-stage theatre set at the east end of the Nelson Fine Arts Center. The Department of Theatre's annual season of 12 to 15 plays also includes productions in the Lyceum and Prism theatres and the Fine Arts Center Studios.

**Grady Gammage Memorial Auditorium.** A versatile center for the performing arts designed by Frank Lloyd Wright and named for the late President Grady Gammage, Grady Gammage Memorial Auditorium seats 3,000 and has won wide acclaim for its design and acoustics. In addition to the great hall and related facilities—including the Aeolian-Skinner organ contributed by Hugh W. and Barbara V. Long—the building contains classrooms and workshops for the College of Fine Arts.

**The Intelligent Stage.** The Intelligent Stage is a production and performance facility designed to explore the possibilities of interactive stage performance. The facility includes a

sprung floor; 30 dimmers and a four channel sound system; a composer workstation; workstations for designing interactive MIDI performances; and a movement sensing, image-processing workstation. All are networked together for multi-machine performance and production. Resident artists and technologists provide design and logistical support for projects in the facility.

**Katzin Concert Hall.** Located in the new music building expansion, the Katzin Concert Hall seats 350 people. Primarily used for solo and chamber music recitals, the hall houses a nine-foot Hamburg concert Steinway piano. The acoustics are enhanced by the maple-paneled stage and the multifaceted walls and ceiling.

**Louise Lincoln Kerr Cultural Center.** Located in Scottsdale, the Louise Lincoln Kerr Cultural Center offers cultural events, especially in the performing arts, to the community.

**Lyceum Theatre.** A small but technically sophisticated 164-seat proscenium-theatre, the Lyceum Theatre is a theatre laboratory devoted to the work of student playwrights, directors, and actors.

**Music Theatre.** As part of the music complex, the Music Theatre, modeled after the Wagnerian Theatre in Bayreuth, Germany, rises five stories and seats an audience of 500. This theatre is the home of many opera and musical productions.

**J. Russell and Bonita Nelson Fine Arts Center.** Designed by Albuquerque architect Antoine Predock, the J. Russell and Bonita Nelson Fine Arts Center is a spectacular, 119,000-square-foot village-like aggregate of buildings that includes five galleries of the ASU Art Museum, the Paul V. Galvin Playhouse, the University Dance Laboratory, seven specialized theatre and dance studios, a video studio, and a variety of scenic outdoor features, including courtyards, fountains, pools, and a 50-by-100-foot projection wall designed for outdoor video.

**Northlight Gallery.** The Northlight Gallery is dedicated to museum-quality exhibitions of historical and contemporary photography. Located in Matthews Hall, it is open during the academic year.

**Organ Hall.** Located in the new music building expansion, the Organ Hall houses the Fritts Organ. This tracker-action pipe organ is designed to capture the qualities of baroque European organs. The hall is designed to complement the organ with a barrel-vaulted ceiling and wooden benches to seat 175 persons.

**Prism Theatre.** The Prism Theatre is an alternative black box space devoted to multiethnic, experimental works and second stage productions.

**Recital Hall.** Located on the fifth floor of the music building, the Recital Hall is an intimate 125-seat facility that opens onto a rooftop courtyard.

**Sundome Center for the Performing Arts.** As America's largest single-level theatre, the Sundome Center for the Performing Arts in Sun City West has 7,169 seats. The theatre is equipped with sophisticated and state-of-the-art lighting systems, and a single-span roof affords each seat a clear view. As one of Arizona's premier entertainment venues, the

Sundome provides a varied array of top entertainment from Las Vegas concerts to classical ballets to celebrity lectures.

**Television Station KAET.** KAET, Channel 8, is the university's PBS station. Studios of the award-winning station are located in the Stauffer Communication Arts Building. To operate 24 hours a day, KAET employs more than 50 ASU students and interns. To learn more about KAET-TV, visit its Web site at [www.kaet.asu.edu](http://www.kaet.asu.edu) or call 480/965-3506.

**University Dance Laboratory.** A flexible performance space within the Nelson Fine Arts Center, the University Dance Laboratory is designed specifically for experimental dance productions. Along with the Dance Studio Theatre in the Physical Education Building East, the University Dance Laboratory is used by the Department of Dance for experimental performances.

**Harry Wood Gallery.** Housed in the Art Building (ART 120), the Harry Wood Gallery provides temporary exhibitions of the visual arts during the academic year.

## COMPUTING FACILITIES AND SERVICES

Computers are fundamental tools for research, instruction, and learning in every college and department at ASU. The Information Technology (IT) department provides a variety of computing equipment and services available for use by students, faculty, and staff.

IT also provides programming, statistical, graphics, and other applications for microcomputers and mainframe computing systems. University-wide electronic mail and the library's online catalog are accessible through a high-speed communications network from many campus sites and offices, and off campus via a telephone connection. Communication with other research facilities is possible through the Internet.

A wide range of information on campus activities and related topics is available online. Faculty, staff, and students can access the ASU Web site at [www.asu.edu](http://www.asu.edu). This site contains information from various colleges, departments, and organizations; currently approved courses; the *Schedule of Classes*; the general and graduate catalogs; a phone and electronic mail directory; the athletic calendar of events; application forms; financial aid information; and much more.

IT provides several service centers, described below, for the ASU academic community.

**Computing Commons.** The Computing Commons building (CPCOM) opened at the beginning of the 1993 fall semester. Designed in 1990, the Computing Commons provides a "technology hub" that draws together students, faculty, and staff from all disciplines on campus in an environment which fosters maximum interaction. The building and its facilities have drawn national recognition and acclaim as a model facility for the support of instruction and research in a technology-based environment. The Computing Commons houses a 225-workstation computing site, nine electronic classrooms, a Visualization Center, the Customer Assistance Center, a computer store, and a technology-based art gallery.

**Computing Sites.** In addition to the Computing Commons computer site, there are four additional sites located on the ASU Main Campus. These sites are available for ASU faculty, staff, and students with an ASURITE user ID. Site con-

figurations and hours of operation vary. Refer to [www.asu.edu/it/fyi/student/compsite.html](http://www.asu.edu/it/fyi/student/compsite.html) for current information.

**Computer Accounts.** The Computer Accounts Office, located on the first floor of the Computing Commons in room 105, offers access to a wide variety of computer services. These services are available to all students, faculty and staff who need to use the computing systems for academic or administrative purposes. To use these services, you need a user ID and password. For information about obtaining a computer account refer to [www.asu.edu/it/fyi/start/accounts.html](http://www.asu.edu/it/fyi/start/accounts.html).

**Customer Assistance Center.** The Customer Assistance Center, located on the second floor of the Computing Commons in room 202, offers a library of reference manuals, computing periodicals, and other information concerning computing systems and software. Self-paced training is available for various software applications running DOS, Windows, Macintosh, Unix, or mainframe operating systems. The Customer Assistance Center also distributes communication, virus protection, and other site-license software as well as site-specific documentation in a “print on demand” environment. Print on demand is also available at [www.asu.edu/it/fyi/document](http://www.asu.edu/it/fyi/document).

**Help Desk/Consulting.** The Information Technology Help Desk provides ASU customers with centralized systems information and first-level assistance in resolving computing problems. Services are available through 480/965-6500, [www.asu.edu/helpdesk](http://www.asu.edu/helpdesk), and walk-in consulting at the Customer Assistance Center, CPCOM 202. The Help Desk assists with data recovery/repair, Web page AFS permissions and file/directories, communication, e-mail, and virus protection software, computing and equipment problem referral.

**Instructional Support.** Instruction Support ([is.asu.edu](http://is.asu.edu)) serves as a development center for the design and delivery of instruction utilizing technology. The Instruction Support Group is composed of interrelated units under which a wide range of talent and expertise is centrally available. Students, faculty, and researchers skilled in the areas of system design, graphics, interactive software, networked delivery, and digital video staff Instruction Support. The group facilitates the development of instruction within the realm of currently available technology and extends the potential to drive innovation and development. From this perspective, Instruction Support takes on the flavors of a research and development unit, a production group, a training facility, and an incubator for technological innovation.

The Instruction Support Group works in collaboration with faculty in the coordination of cross-disciplinary research and production projects relating to the integration of technology with education. Through partnerships with faculty and groups outside ASU, grant writing teams are able to leverage support that may not otherwise be attainable by a single academic unit or faculty member. Central to effective support service is the establishment of a partnership among the various support units within the university. Instruction Support coordinates the efforts of groups, which include the College of Extended Education, University Libraries, Disability Resources for Students, and the Office

of Research and Creative Activities, to provide faculty with a wide array of support services.

Instruction Support offers consultation sessions tailored toward enhancing the instructional use of technology by the university teaching community. Sessions range from an introduction to technology in education through advanced and customized approaches for instructors in specific programs.

**Instruction Support (IS) Lab.** The IS Lab provides an environment in which faculty may seek and receive one-on-one, guided or independent support for course development and delivery. Expert staff work closely with faculty to refine and develop their skill and confidence in the design and delivery of instruction through a variety of technology supported means, including synchronous and asynchronous learning. Located on the second floor of the Computing Commons, the IS Lab provides faculty, university professionals, and graduate students with a unique opportunity to integrate technology with instruction. The IS Lab sponsors workshops and demonstrations, and serves as a dynamic clearinghouse of information and referrals for effective integration of technology with education.

**Research Support.** Research Support ([www.asu.edu/it/irs/rs](http://www.asu.edu/it/irs/rs)) provides assistance to faculty, staff, and student researchers in both scientific and creative endeavors. Research Support encompasses both processing and operations. Processing involves consulting in the use of software tools and program coding directly related to projects or specific research. Operational activities support overall workflow of university computing facilities. Activities include consulting for computation, statistics, visualization, and geographical information system platforms in conjunction with software package installation/use, media conversion, and product evaluation.

A variety of computation facilities are provided in support of research and creative endeavors within the ASU community. Computing facilities range from individual workstations to SMP/MPP servers and mainframes. Extended computer capabilities are available through access to national computing centers.

**Geographic Information Systems (GIS) Lab and Visualization Center.** The GIS Lab and Visualization Center both seek to establish partnerships with faculty, staff, and students to acquire, create, and enhance research and creative endeavors through the effective use of Visualization and GIS technologies.

The Visualization Center is located on the second floor of the Computing Commons in room 235. The center offers faculty, staff, and graduate students hardware and application software resources and services for high-level graphics and visualization used in research. Researchers can receive assistance ranging from interactive viewing of scientific data to visualization from both the Liberal and the Performing Arts and other visually related endeavors. The Visualization Center serves as a focal point for developing technologies in software, hardware, and communications.

The GIS Lab staff assists researchers with hardware and software and data to facilitate the creation of geographic information systems for spatial analysis, query, and display. The lab supports research from various disciplines and provides additional resources to students who are enrolled in classes for GIS instruction. The GIS Lab, also located in

Computing Commons 235, serves as a focal point for GIS users to meet and share information and technical expertise.

## ALUMNI ASSOCIATION

Founded in 1894, the Alumni Association is a volunteer-led organization committed to serve and unite alumni for the purpose of advancing the interests of Arizona State University and its alumni. The association provides a variety of services for ASU alumni as well as a series of events scheduled around the country.

With more than 200,000 alumni living in every state and throughout the world, the association plays an important role as the university's primary support organization. Comprising more than 40 groups, the campus, college, club, and chapter organizations (4Cs) of the association provide opportunities for all alumni to stay involved with the part of ASU that interests them most.

Members of the ASU Alumni Association Board of Directors are elected each spring.

The association's professional staff is led by Executive Director Susan Clouse Dolbert.

For information about the association or its board of directors, call 1-800-ALUMNUS or 480/965-ALUM (2586).

## RESEARCH CENTERS, INSTITUTES, AND LABORATORIES

These units serve the university's mission in research. They are overseen by eight of the colleges, the vice provost for Research, and ASU East.

### College of Architecture and Environmental Design

**Herberger Center for Design Excellence.** The Herberger Center for Design Excellence serves the Phoenix area through research, publications, and symposia regarding urban design and environmental planning issues. For more information, call 480/965-6693.

### College of Business

**L. William Seidman Research Institute.** The mission of the L. William Seidman Research Institute is to encourage and support business research by serving as a public access point to the College of Business. Specific goals include transferring new knowledge to the public; supporting faculty and student research; encouraging the development of educational programs grounded in business research; and conducting high-quality, applied business research.

The institute encourages research activity by providing research support services to the faculty, staff, and students of the college. This includes facilitating grant preparation and assistance in grant administration. Its research centers act as the focal point for involving faculty and students in applied research on important issues identified by the business community.

The institute also serves an important role in the broader educational mission of the College of Business by disseminating the findings of research conducted by the faculty, students, and research center staff, as well as the results of business research from other sources around the world. This is accomplished through a variety of mechanisms: newsletters and research reports; seminars and conferences; internet Web pages; media interviews and press releases; and by

responding to inquiries from businesses, public officials, and the community.

For more information, contact the director, L. William Seidman Research Institute, BA 319, 480/965-5362. The institute's Web site is [www.cob.asu.edu/seid](http://www.cob.asu.edu/seid).

**Arizona Real Estate Center.** The Arizona Real Estate Center, established in 1980, serves a multifunction research and educational role to foster better understanding of the real estate sector of the Arizona economy. Housing, commercial real estate, and construction activity data for Arizona and Maricopa County are collected by the center and are utilized for a variety of ongoing projects, including the calculation of affordability indexes and the computation of housing appreciation figures for the metropolitan Phoenix area. The center's annual outlook series provides a public forum for prominent members of the real estate industry to present their perceptions of market conditions.

For more information, contact the director, Arizona Real Estate Center, BA 319, 480/965-5440. The center's Web site is [www.cob.asu.edu/seid/arec](http://www.cob.asu.edu/seid/arec).

**Bank One Economic Outlook Center.** The Bank One Economic Outlook Center (EOC), established in 1985, specializes in economic forecasts of Arizona and the Western states. The center publishes the *Bank One Arizona Blue Chip Economic Forecast* (monthly), *Greater Phoenix Blue Chip Economic Forecast* (quarterly), *Western Blue Chip Economic Forecast* (10 issues per year), and *Blue Chip Job Growth Update* (monthly), an update of current job growth in the United States. The center also publishes *Mexico Consensus Economic Forecast* (quarterly), a forecast and historical data on the Mexican economy.

For more information, contact the director, Bank One Economic Outlook Center, BA 319, 480/965-5543. The center's Web site is [www.cob.asu.edu/seid/eoc](http://www.cob.asu.edu/seid/eoc).

**Center for the Advancement of Small Business.** The Center for the Advancement of Small Business (CASB) is the 21st-century leader in business education, practice, and research that provides high-quality, relevant programs, and information services focused on small business since 1994. The center enables students and existing small and medium-sized businesses to participate, contribute, and compete in the global economy.

The center provides students from all disciplines with programs and resources that prepare them for positions of leadership in small and medium-size businesses, and aids small and medium-size businesses in the continuous improvement of their human resources and business practices. CASB also engages in applied research on entrepreneurship and the emerging changes and trends in small business.

For more information, contact the director, Center for the Advancement of Small Business, BAC 111, 480/965-3962. The center's Web site is [www.cob.asu.edu/seid/casb](http://www.cob.asu.edu/seid/casb).

**Center for Advanced Purchasing Studies.** The Center for Advanced Purchasing Studies (CAPS) was established in November 1986 by a national affiliation agreement between the ASU College of Business and the National Association of Purchasing Management (NAPM). It is the first and only program of its kind in the nation and is located in the Arizona State University Research Park, about eight miles south of the main ASU campus. CAPS conducts in-depth

research into the problems facing the purchasing profession today and, through its studies, seeks to improve purchasing effectiveness and efficiency and the overall state of purchasing readiness.

For more information, call 480/752-2277, or contact

DIRECTOR, CENTER FOR ADVANCED  
PURCHASING STUDIES  
ASU RESEARCH PARK  
2055 E CENTENNIAL CIRCLE  
PO BOX 22160  
TEMPE AZ 85285-2160

**Center for Business Research.** The Center for Business Research (CBR) has been a consistent source of information on the Arizona and metropolitan Phoenix economies since 1951. Both the business community and the public have had access to the economic indicators produced by the ongoing projects of the center, including quarterly net migration estimates for Arizona and Maricopa County, and the Metropolitan Phoenix Consumer Price Index. The center also conducts projects under the sponsorship of private and public agencies. Recent examples include: the economic impact of Super Bowl XXX, a study of seasonal migration to Arizona, and an analysis of the state's hospital industry. A monthly publication of the center, *AZB/Arizona Business*, plays a major role in disseminating to the public the economic information compiled by the research centers of the Seidman Institute. The staff within the center is available to respond to inquiries and to provide available data.

For more information, contact the director, Center for Business Research, BA 319, 480/965-3961. The center's Web site is [www.cob.asu.edu/seid/cbr](http://www.cob.asu.edu/seid/cbr).

**Center for Services Marketing and Management.** The Center for Services Marketing and Management (SMM Center) is a leading university-based hub devoted to the study of services marketing and management since 1985. The SMM Center addresses how any company can improve internal service processes and use service and customer satisfaction as a competitive advantage. The center is cross-industry in nature, encouraging firms to share the best ideas and practices for adaptation across industries. Though grounded in marketing, the center's work is also cross-functional, integrating concepts and techniques from marketing, operations, human resources, and management.

The center's areas of expertise include customer retention and loyalty; service quality; service delivery; professional services such as healthcare, accounting and consulting services; customer satisfaction; services strategy; service culture; and service recovery. A leader in the business and academic communities, the SMM Center's work advances the knowledge base in the field and provides applicable frameworks, concepts, and tools.

The center offers its partner firms top flight executive education in services through the annual "Activating Your Firm's Service Culture" symposium, the annual "Services Marketing and Management" institute, and the annual "Information Technology Services Marketing" course, and provides customized executive education programs and research projects which are tailored to and conducted for charter member firms.

The center also actively supports the College of Business' M.B.A. program that offers a certification in Services Marketing and Management. The services track infuses strong

company-based experience and encourages summer internships.

For more information, contact the director, Center for Services Marketing and Management, BAC 440, 480/965-6201.

**Center for the Study of Finance.** The Center for the Study of Finance (CSF), established in 1986, serves the national financial, policy-making, and academic communities through research, publications, conferences, and educational programs. The focus of such activities is on the changing nature of the domestic and international financial system with such specific areas as the interaction between financial markets, deposit insurance reform, the deregulation of financial institutions, the financing of mergers and acquisitions, and the effect of government policy on financial markets receiving recent attention.

For more information, contact the director, Center for the Study of Finance, BAC 519, 480/965-5229.

**Joan and David Lincoln Center for Applied Ethics.** The Joan and David Lincoln Center for Applied Ethics (LCAE) has provided training and sponsored research in applied ethics for organizations since 1980. The center's research focuses on the connection between valued-based businesses and their financial performance. Its study of companies with 100 years of consistent dividend payments has been reported in *The Wall Street Journal* and numerous academic and professional journals.

The center sponsors an annual conference on organizational ethics as well as on ethics for lawyers beyond the profession's code and model rules. Examples of topics covered in the center's published research reports include lawyers and ethics, ethics and international labor practices, the rogue employee and ethics in organizations, and ethics and cultural variances in international business.

Each year the center recognizes an outstanding business leader for exemplary ethical standards. Recipients of the Lincoln Center award in the past have been Lewis W. Lehr of 3M, the center's first recipient; Sir Adrian Cadbury of Cadbury Schweppes; Robert W. Galvin of Motorola; James Houghton of Corning Glass Works; R. William Taylor of the American Society of Association Executives; Jerry Junkins of Texas Instruments; Bowen McCoy of Buzz McCoy Associates, Inc.; and Aaron Feuerstein of Malden Mills Industries, Inc.

For more information, contact the director, Joan and David Lincoln Center for Applied Ethics, BA 352B, 480/965-2710.

**Manufacturing Institute.** See "Manufacturing Institute," page 37, for information about this joint venture of the College of Business and the College of Engineering and Applied Sciences.

### College of Education

**Center for Bilingual Education and Research.** The Center for Bilingual Education and Research (CBER) was created in 1980 to conduct policy-relevant research in bilingual and dual-language education. The center's scope of work is driven by a need to merge several related topics into a single articulated conversation: English/Spanish biliteracy; promoting the role of public education to strengthen communities; and enabling binational collaboration among educators on both sides of the U.S.-Mexico border. The long-term

vision is to help develop a new pedagogy tailored to the needs of the bicultural region the center serves. The integration of these themes shapes the scope of work for CBER in these areas:

1. Within the broad scope of educational policy research, CBER focuses on scholarly inquiry that contributes to informed and enlightened discourse on language policy for schools and society, especially on the harmonious coexistence of English, the national language; and Spanish, the second most used language in our society.
2. Life in the American Southwest is bicultural and increasingly binational. In this Pan-American context, bilingualism will gain in importance. Equally important will be the collective ability of residents on both sides of the border to work harmoniously in pursuit of a common destiny that will be ever more intertwined. Schools must help children and youth develop skills and predispositions to face this challenge.
3. Mexico and the U.S. are becoming more interdependent. In this context, Mexican educators should have opportunities to contribute to improving education for Mexican immigrant children in U.S. schools. To enable this, schools must create pilot projects and a collaborative infrastructure for collaboration among institutions and individuals on both sides of the U.S.-Mexico border.

For more information, contact the director, Center for Bilingual Education and Research, ED 414, 480/965-7134.

**Center for Indian Education.** The Center for Indian Education is an interdisciplinary research and service center established in 1959. It promotes studies in American Indian policy and administration that contribute to scholarship and effective practices in education, professional training, and tribal capacity building. It is structured to foster relations between the university and sovereign tribes, and to provide training and technical assistance for community programs. The center publishes the *Journal of American Indian Education* and sponsors workshops and colloquia that bring together scholars and tribal community leaders.

The center provides leadership through a group of American Indian faculty and is organized on the basis of scholarly expertise of the faculty. In addition to College of Education faculty, responsibilities are shared by faculty from the School of Social Work, the School of Justice Studies, the College of Liberal Arts and Sciences, and the College of Law. Areas currently studied include administrative leadership, policy analysis, bilingual education, health and welfare policy, justice studies, and program development in professional studies.

For more information, contact the director, Center for Indian Education, ED 415, 480/965-6292.

### College of Engineering and Applied Sciences

**Center for Innovation in Engineering Education (CIEE).** This center, established in September 1994, promotes and encourages visionary approaches to educating engineering students. The center seeks support for 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 graduates.

The vision of the center is that its programs will (1) create and continuously improve educational systems that will develop in graduates the skills, knowledge, and attitudes required for them to quickly and effectively become world-class engineers; and (2) develop an expanding team of scholars that desires to actively explore new and improved educational theories, methods, and technologies to improve teaching and learning.

For more information, contact the CIEE director, ECG 205, 480/965-5350, or access the center's Web site at [www.eas.asu.edu/~asufc/ciee](http://www.eas.asu.edu/~asufc/ciee).

**Center for Research in Engineering and Applied Sciences.** The Center for Research in Engineering and Applied Sciences supports the faculty and students in the knowledge creation and discovery mission of the university. The center provides research support services for all research in the college as well as interfacing with the research offices of the university and other colleges. The center area also supports the contribution of the college to the state's economic development through collaborative research partnerships with and technology transfer to industry. Specialized and interdisciplinary efforts are currently in place in such areas as acoustics, air pollution, alternative energy, applied mechanics, artificial intelligence, automated manufacturing, bioengineering, communications, computational microelectronics, computer-aided design and manufacturing (CAD/CAM), computer-integrated manufacturing (CIM), computer science, control systems, data and information systems, electrical characterization, environmental resources and control, expert systems, fluid mechanics, fuels and combustion, materials, mass transfer, metallurgy, nuclear radiation, photovoltaics, plasma, plastics, power systems, analyses, robotics, semiconductor materials and fabrication, semiconductor processing, signal processing, soil mechanics, solar thermal energy, solid-state electronics and systems design and analysis, telecommunications, thermodynamics, transportation systems, turbines, very-large-scale integrated (VLSI) circuits, waste management, and water resources.

For more information, contact the director, Center for Research in Engineering and Applied Sciences, ECG 136, 480/965-1725, or access the center's Web site at [www.eas.asu.edu/research](http://www.eas.asu.edu/research).

**Center for Low Power Electronics.** The technical areas of focus include

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 multi-chip VLSI systems.

For more information, contact the director, Center for Low Power Electronics, ENGR 115, 480/965-3708.

**Center for Solid-State Electronics Research.** CSSER focuses on research in the areas of semiconductors crystal

growth, both by bulk and epitaxial techniques; device characterization and modeling; defect behavior in semiconductor material characterization; processing; fine line lithography; surface analysis; and transport. Major programs address semiconductor device modeling, transport theory, optoelectronics, ferroelectrics, semiconductor processing, microwave devices, and ultra-submicron devices. New programs address synthetic neural systems and their impact on VLSI design. Research in the specially designed facilities includes various aspects of submicron dimension devices.

For more information, contact the director, Center for Solid-State Electronics Research, ENGR 115, 480/965-3708 or access the center's Web site at [ceaspub.eas.asu.edu/csser](http://ceaspub.eas.asu.edu/csser).

**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 the university's goal of becoming one of the leading educational and research institutions in both manufacturing enterprise and manufacturing process technology issues. The institute has two academic codirectors, one each from the College of Business and the College of Engineering and Applied Sciences, and has active industry involvement.

For more information, contact one of the directors, Manufacturing Institute, GWC 402, 480/965-3709, or access the institute's Web site at [mi.asu.edu/mi](http://mi.asu.edu/mi).

**Center for System Science and Engineering Research.** The Center for System Science and Engineering Research has established four focus areas: nonlinear dynamical systems, control theory and its applications, mathematical neuroscience, and scientific computing and interdisciplinary systems engineering. The center 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.

For more information, contact the SSERC director, GWC 606, 480/965-8382, or visit the center's Web site at [www.eas.asu.edu/sserc](http://www.eas.asu.edu/sserc).

**Telecommunications Research Center.** Telecommunications play a vital role in home, commercial, entertainment, educational, scientific, and military systems. The Telecommunications Research Center focuses its interests and activities in research and educational programs. The approach is to conduct basic and applied research, develop technologies, and provide education programs in all major areas of telecommunications, from signal generation to reception. The targeted areas of excellence are antennas, propagation, and scattering; microwave circuits, devices, and measurements; optical communications; signal processing; broadband switching; and communication systems. Ultramodern laboratories and computational facilities are associated with the center.

For more information, contact the director, Telecommunications Research Center, GWC 411, 480/965-5311.

## College of Fine Arts

**Institute for Studies in the Arts.** As the research center for the College of Fine Arts, the Institute for Studies in the Arts (ISA) serves as a laboratory for the research and development of new art forms, new ideas and concepts, and innovative 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. ISA addresses the needs of a variety of populations through technical and monetary support and sponsorship of research projects, performances, exhibitions, and symposia.

ISA facilities include an experimental performance studio at Drama City and a state-of-the-art video production and post-production laboratory in Matthews Center. ISA maintains a database of interdisciplinary scholarship in the arts and actively seeks to communicate with researchers from diverse backgrounds in the ASU community and worldwide.

ISA is open to a wide range of research proposals from both faculty and graduate students, provided such proposals address the ISA mission of experimentation and innovation in the arts.

For information, contact the director, Institute for Studies in the Arts, MCENT 224, 480/965-9438, or visit ISA's Web site at [researchnet.vprc.asu.edu/isa](http://researchnet.vprc.asu.edu/isa).

## College of Law

**Center for the Study of Law, Science, and Technology.** Located in the College of Law, the center conducts research, edits *Jurimetrics: The Journal of Law, Science and Technology* in cooperation with the American Bar Association Section on Science and Technology, and sponsors seminars, workshops, and conferences. Through these activities, 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. Current areas of research include communications and telecommunications law, computer-related law, forensic science and statistics, legal issues and biotechnology, law and medicine, and law and social science.

For more information, contact the director, Center for the Study of Law, Science, and Technology, LAW 102, 480/965-2124.

## College of Liberal Arts and Sciences

**Arizona Center for Medieval and Renaissance Studies (ACMRS).** The Arizona Center is a research unit serving affiliate scholars from ASU, Northern Arizona University, and the University of Arizona. It represents a variety of disciplines including history, literature, philosophy, religion, language, music, art, and science. ACMRS enriches academic offerings in medieval and renaissance studies by sponsoring one or two visiting professors each year. Graduate research assistantships are also available through the center.

Significant opportunities for the study of the Middle Ages and the Renaissance exist at ASU. Hayden Library has an extensive microfilm collection and many rare books in medieval and renaissance studies. ACMRS also sponsors a lecture series each semester covering a variety of topics.

Other programs include an annual conference, a public symposium, a summer study abroad program at University of Cambridge (United Kingdom), and student exchange

programs with the University of Copenhagen (Denmark) and the University of Kalmar (Sweden).

Since 1996, ACMRS has published *Medieval & Renaissance Texts & Studies (MRTS)*, a major series of editions, translations, and reference works. In collaboration with the University of Massachusetts at Dartmouth and the Medieval and Renaissance Committee of the University of Michigan, ACMRS sponsors and coedits *Mediterranean Studies*, an annual interdisciplinary journal publishing articles on all aspects of the Mediterranean region. ACMRS also sponsors a book series titled "Arizona Studies in the Middle Ages and the Renaissance," published by Brepols (Belgium).

ACMRS also partners with the Renaissance Society of America and the University of Toronto in "Iter," a massive, retrospective, online medieval and renaissance bibliography covering all languages and disciplines, and is the official site of the Medieval Academy of America's online data project offering information on medieval centers, programs, committees, and regional associations in North America.

For more information, contact the director, Arizona Center for Medieval and Renaissance Studies, SS 224, 480/965-5900, or access the Web site at [www.asu.edu/clas/acmrs](http://www.asu.edu/clas/acmrs).

**Cancer Research Institute.** Significant advances in the treatment of human cancer and other serious medical problems depend upon scientists well trained in organic chemistry, biochemistry, and biology. The Cancer Research Institute provides graduate students with the specialized training necessary for research in the discovery and development of effective anticancer drugs. Among various activities, laboratory personnel are pursuing a unique program concerned with isolation, structural identification, and synthesis of naturally occurring anticancer agents from marine animals, plants, and marine microorganisms.

For more information, contact the director, Cancer Research Institute, CRI 209, 480/965-3351.

**Center for Asian Studies.** Through its East Asian and Southeast Asian studies programs, the center serves as research coordinator for Asian studies' faculty and graduate students in a variety of disciplines. The center sponsors colloquia and research conferences. It also publishes two scholarly *Monograph Series* and a newsletter on Southeast Asian studies, *Suvannabhumi*, which have an international readership. Graduate students may apply for research assistantships in the center and its program.

The center administers student exchange programs with a number of universities in Asia. The center also sponsors a graduate student colloquium and film series on Asian topics. A reading room is located in the center office suite offering a variety of Asian and English language publications and newspapers from and about Asia.

For more information, contact the director, Center for Asian Studies, WHALL 105, 480/965-7184.

**Center for Meteorite Studies.** One of the nation's largest collections of extraterrestrial materials is available for research in the Center for Meteorite Studies. Teaching and research on meteorites, meteorite craters, and related areas of space and planetary science are accomplished through the regular academic units in cooperation with the center.

For more information, contact the director, Center for Meteorite Studies, PS C151, 480/965-6511.

**Center for Solid-State Science.** The Center for Solid-State Science is a research unit within the College of Liberal Arts and Sciences.

The membership comprises faculty and academic professional researchers and research support personnel, most of whom hold simultaneous appointments in affiliated academic units. The Center for Solid-State Science is the ASU focal point for interdisciplinary research on the properties and structures of condensed phases of matter at the interfaces between solid-state chemistry and physics, earth and planetary science, and materials science and engineering. It also supports interdisciplinary approaches to science and engineering educational outreach activities.

The center provides an administrative home for large, multidisciplinary, block-funded research projects. These include the NSF-supported Materials Research Science and Engineering Center (MRSEC) and the Interactive Nano-Visualization for Science and Engineering Education (INVSEE) project. To support these activities, members of the center operate modern and sophisticated research facilities and organize regular research colloquia and symposia.

Principal topical areas of research in the center include studies of structure and reactivity of surfaces and interfaces, electronic materials, advanced ceramics and glasses, synthesis of new materials, high pressure research, development of techniques in high resolution electron microscopy and micro-structural and chemical analysis, development of visualization techniques at different scales of magnification for science education and community outreach.

The research facilities of the center include

- A. **The Center for High Resolution Electron Microscopy (CHREM)**, which operates several ultra high resolution and ultra high vacuum electron microscopes and supports microscopy methods, and instrumentation development, including holography, position- and time-resolved nano-spectroscopy and energy-filtered imaging and diffraction. The center provides high-resolution capability for a large external group from other universities and industry.
- B. **The Goldwater Materials Science Laboratories (GMSL)**. These facilities include
  1. the Materials Preparation Facility (MPF), which provides a wide range of synthesis and processing capabilities for preparation of specimen materials. MPF also provides thermal analysis for study of solid-state reactions and Auger and X-ray photoelectron spectroscopy for analysis of surface compositions and electronic structure of surfaces;
  2. the Materials Science Electron Microscopy Laboratory (MSEML), which provides state-of-the-art electron microscopes for analysis of microstructures, including imaging and diffraction, and high spatial resolution chemical analysis using energy dispersive X-ray and electron energy loss microspectroscopy;
  3. the Ion Beam Analysis of Materials (IBeAM) facility, which provides compositional and structural determination of the surface and near-surface regions (0–2mm) of solids by ion beam analysis where elemental composition and depth distribution information are needed. Channeling experiments

- are used to determine crystal perfection and site occupancy;
4. the Secondary Ion Mass Spectrometry (SIMS) laboratory, which provides depth profile and point composition analysis with very high chemical sensitivity, on the order of one part per billion, including isotopic analysis for many materials. SIMS is also used as a chemical microscope, to image elemental distributions on specimen surfaces;
  5. the Scanning Probe Microscopy Laboratory (SPM), which provides facilities for nanoscale viewing of solid surfaces using scanning tunneling microscopy (STM), atomic force microscopy (AFM) and related techniques. The SPM laboratory serves as a focus for undergraduate research training programs, and educational and outreach activities;
  6. the High Pressure Laboratory (HiPLAB), which provides facilities for synthesis of new materials and for geochemistry/geophysics studies at up to 25 Gpa (250,000 atmospheres) and temperatures greater than 2000° C. These facilities are complemented by diamond anvil cells capable of in situ studies at up to one million atmospheres. This laboratory provides a focus for core research projects within the MRSEC;
  7. the Visualization Facility (VF), which consists of a battery of linked workstations for remote operation of instruments and data collection, capture of images in real time, and advanced computing and simulation of materials. The VF is used in research and in undergraduate and graduate education, as well as in educational and community outreach; and
  8. other specialized laboratories under development include high resolution X-ray diffraction for thin film characterization, optical spectroscopy, and nuclear magnetic resonance spectroscopy for solid-state studies and research on materials under extreme conditions.

These facilities provide the primary teaching and research resources used by students in the Science and Engineering of Materials interdisciplinary Ph.D. program and the undergraduate option for Materials Synthesis and Processing. They are also used extensively by students in disciplinary programs from affiliated departments.

For more information, contact the Director, Center for Solid-State Science, PS A213, 480/965-4544.

**Center for the Study of Early Events in Photosynthesis.** This center, located in the College of Liberal Arts and Sciences, was established at ASU in 1988 as part of the USDA/DOE/NSF Plant Science Centers Program. The center serves as an infrastructure supporting ASU scientists who study photosynthesis using a variety of methods and approaches, ranging from molecular biology and biochemistry to organic chemistry, ultrafast laser spectroscopy, X-ray crystallography, and theoretical chemistry. It is designed to enhance undergraduate, graduate, and postdoctoral education through multidisciplinary cooperative research projects.

The ultimate objective of the research is the elucidation of the basic principles governing the biochemical and biophysical processes of photosynthetic energy storage. This

goal is being realized via investigation of the early events of photosynthesis, including: light absorption and excitation transfer in photosynthetic antennas; the mechanism of primary photochemistry in plant and bacterial systems; secondary electron transfer processes; structure and assembly of photosynthetic antennas, reaction centers, and electron transfer proteins; pigment-protein interactions; artificial and biomimetic photosynthetic solar energy conversion systems; and mechanisms of biological electron transfer reactions.

The center is equipped with state-of-the-art instrumentation which allows students to do frontier research in a broad range of disciplines. Equipment includes a variety of pulsed lasers for measurements with time resolution ranging from sub-picoseconds to seconds; a 500 MHz NMR instrument; an EPR spectrometer; a protein X-ray facility; spectrophotometers; fluorometers; a protein sequencer; and an amino acid analyzer.

The center sponsors a weekly Photosynthesis Seminar Series and brings in visiting scientists from around the world to carry out collaborative research. Undergraduate, graduate and postdoctoral training programs in the Department of Chemistry and Biochemistry and the Department of Plant Biology are central components of the activities of the center.

For more information, contact the director, Center for the Study of Early Events in Photosynthesis, PS D207, 480/965-1963.

**Exercise and Sport Research Institute.** The Exercise and Sport Research Institute (ESRI) is an interdisciplinary research unit located in the Department of Exercise Science and Physical Education and serves, in part, as a research facility for the interdisciplinary doctoral program in exercise science.

The major research areas can be described as follows. *Biomechanics* applies the laws of physics to the study of human movement. It examines internal and external forces applied to the human body and the effects these forces have on the body. *Exercise physiology* studies the acute responses of the body to exercise and its chronic adaptations to training. It also studies the interrelationships among physical activity, performance, and health. *Exercise biochemistry* studies the provision and regulation of energy transfer during and after exercise. *Exercise endocrinology* studies interrelationships of exercise and training with stress, hormones, neurotransmitters, and the immune system. *Motor behavior and sport psychology* study human behavior in motor activity and sport settings. *Motor behavior* includes the subdomains of *motor learning, control, and development*. Motor learning focuses on skill acquisition, motor control studies how movement is regulated and controlled via the nervous system in normal and pathological populations, and motor development studies how growth and maturation affect performance and learning across the lifespan. Within the context of sport and exercise, *sport psychology* examines the influence of psychological variables on performance or health and the influence of participation on psychological phenomena.

The ESRI is affiliated with a number of medical institutions in the Phoenix area.

Faculty and graduate students at the ESRI are investigating a wide range of topics concerning human physical activity, including different ages, levels of health, levels of ability and fitness, and environments; and levels and types of train-

ing, body composition, nutrition, and physical and emotional stresses. Where applicable, these aspects are studied using an interdisciplinary approach.

For more information, contact the director, Exercise and Sport Research Institute, PEBE 159, 480/965-7473.

**Hispanic Research Center.** The Hispanic Research Center (HRC) at ASU is an interdisciplinary unit, dedicated to research and creative activities, that is university-wide but administered through the College of Liberal Arts and Sciences. The HRC performs basic and applied research on a broad range of topics related to Hispanic populations, disseminates research findings to the academic community and the public, engages in creative activities and makes them available generally, and provides public service in areas of importance to Hispanics.

Faculty, staff, and advanced graduate students organize into working groups to develop a broad range of specific projects and lines of inquiry within the general categories of Hispanic entrepreneurship, science and technology, information and data compilation and dissemination, the Hispanic polity, and the arts. Ongoing activities of the HRC, primarily funded by external grants, include the Arizona Hispanic Business Survey, the *Bilingual Review Press*, the Coalition to Increase Minority Degrees, the Community Art and Research Outreach (CARO), *Compañeros en la Salud*, Project 1000, and the Western Alliance to Expand Student Opportunities.

CARO sponsors creative activities and action research in collaboration with community-based organizations and ASU faculty.

For more information, contact the director, Hispanic Research Center, CFS 104, 480/965-3990.

**Institute of Human Origins.** The Institute of Human Origins (IHO), founded in 1981 by Donald Johanson, became part of the College of Liberal Arts and Sciences in 1997. IHO is a multidisciplinary research organization dedicated to the recovery and analysis of the fossil evidence for human evolution and the establishment of a chronological framework for human evolutionary events. IHO's scientists carry out field research at sites in Africa, the Middle East, and Asia. IHO houses the largest collection of *Australopithecus afarensis* casts (including "Lucy," a 3.2 million-year-old human ancestor) in the world as well as an extensive collection of other fossil hominid casts. IHO's library contains more than 3,000 volumes, numerous journals, videotapes, audiotapes, and slides related to human evolution and fossil sites. IHO produces periodic newsletters, offers lecture series, conducts tours and workshops, and supports numerous informal science education outreach projects.

For more information, visit the Institute of Human Origins, SS 103, or call 480/727-6580 or access the Web site at [www.asu.edu/clas/iho](http://www.asu.edu/clas/iho).

**Latin American Studies Center.** Arizona maintains an ever-growing interest in Latin America that draws upon an extensive experience of historical and geographical ties. The Latin American Studies Center is the focal point for these interests at ASU. Through its program, the center serves the university community and maintains strong ties with various Latin American organizations in the state and the nation. Principal activities are coordinating Latin American studies at the undergraduate and graduate levels; sponsoring student exchange programs, organizing events featuring

Latin American arts and culture, numerous seminars, and research conferences; publishing a wide range of professional materials; and undertaking and facilitating research about the region.

The center administers student exchange programs with the Catholic University of Bolivia and three Mexican universities—the Autonomous University of Guadalajara, the Autonomous University of Nuevo Leon, and the University of Sonora. Each spring several ASU students are selected to attend courses at the Latin American universities while Bolivian and Mexican students attend ASU.

The center is a member of the American Modern Language Association, Consortium of U.S. Research Programs for Mexico, Consortium for Latin American Studies Association, Pacific Coast Council on Latin American Studies, Rocky Mountain Council for Latin American Studies, Consortium of Latin American Studies Programs, and Conference on Latin American History.

The center directly encourages research, not only through its research conferences, but also through close coordination with the Latin American collection of Hayden Library and networking with Latin American universities.

For more information, contact the director, Latin American Studies Center, SS 213, 480/965-5127.

## College of Public Programs

**Morrison Institute for Public Policy.** Established in 1981 by the Morrison family of Gilbert, Arizona, as a unit within the School of Public Affairs, the Institute conducts research on public policy matters, informs policy makers and the public about issues of importance, and advises leaders on choices and actions. Morrison Institute offers a variety of services to public and private sector clients and pursues its own research agenda. Services include policy research, program evaluation, and public outreach. The institute's interests, research, and publications span such areas as education, urban growth, human services, workforce development, economic development, and arts and culture.

For more information, call 480/965-4525, visit the Web site at [www.asu.edu/copp/morrison](http://www.asu.edu/copp/morrison), or write

MORRISON INSTITUTE FOR PUBLIC POLICY  
ARIZONA STATE UNIVERSITY  
PO BOX 874405  
TEMPE AZ 85287-4405

## Vice Provost for Research

**Center for Environmental Studies.** Established in 1974, the primary mission of the center is to facilitate collaborations among faculty researchers and to aid decision making about environmental issues. Through its collaborations, both with ASU faculty and partners from government, business, and the educational community, the center advances the identification of key local and global environmental issues and collects reliable information to be used by scholars, policy makers, and the general public.

The center is also home to the Central Arizona-Phoenix Long-Term Ecological Research (CAP LTER) project, only one of two urban sites in the NSF-funded LTER network. The CAP LTER project focuses on an arid-land ecosystem profoundly influenced, even defined, by the presence and activities of humans, and involves over 50 associated faculty from biology, ecology, engineering, geography, geology, sociology, urban planning, and anthropology.

The center also facilitates applied environmental research projects undertaken by the Southwest Center for Environmental Research and Policy (SCERP), a consortium of five U.S. and four Mexican universities. SCERP develops a research agenda for the study of air and water quality, hazardous waste problems, environmental health issues and growth management questions in the border region.

The center manages the Sierra Ancha Research Station, located at an elevation of 5,000 feet in the desert-pine forest transition. The station offers research potential in biology, geology, anthropology, physical geography, and resource management. Research space and living accommodations are also available for academic, research, and community organizations. For more information, contact the director, Center for Environmental Studies, Tempe Center (Univer-

sity and Mill), 480/965-2975 or visit the center's Web site at [www.asu.edu/ces](http://www.asu.edu/ces).

### ASU East

**Center for Agribusiness Policy Studies.** The Center for Agribusiness Policy Studies carries out research and development relating to agribusiness, rural development, multiple use of scarce resources, and public policy. The center addresses regional, national, and international development in the context of global and competitive markets for agricultural products and inputs. For more information, contact the director of the Center for Agribusiness Policy Studies at 480/727-1583.



Noble Science and Engineering Library

Dave Tevis photo

# Fees, Deposits, and Other Charges

The Arizona Board of Regents reserves the right to change fees and charges without notice. The current semester *Schedule of Classes* generally reflects up-to-date fee amounts.

The following fees apply to both credit and noncredit (audit) registrations and are subject to change.

## DEFINITIONS

*Resident tuition* refers to the charge assessed to all resident students who register for classes at ASU. *Nonresident tuition* refers to the charge assessed to nonresident students, as established in Arizona Board of Regents' Policy 4-102.

## ACADEMIC YEAR TUITION

The resident and nonresident tuition for fall and spring semesters is shown in the "1999–2000 Resident and Nonresident Tuition" table on this page. The amounts listed are per semester hour each academic term. For more information on classification for fee status, see "Residency Classification Procedures and Policies," page 45.

Students registered for seven or more hours are considered full-time for tuition payment purposes. See "Enrollment Verification Guidelines," page 92.

*Note:* The rate for one hour is charged if the student is registered for only a zero-hour class.

**Graduate College Differential Fees.** Certain graduate programs assess an additional differential fee. These fees differ according to college and/or program. Contact your program advisor for details on these fees.

**Summer Sessions Fees.** The 1999 registration fee per semester hour is \$115 except for law students. The registration fee per semester hour for law students is \$259. For more information, see "Summer Sessions," page 96, and the *Summer Sessions Bulletin*.

## OTHER FEES, DEPOSITS, AND CHARGES

**Special Class Fees and Deposits.** Certain university classes require payment of fees or deposits for materials, breakage, and rentals. These fees and deposits are listed in the *Schedule of Classes* for each semester. See the "Special Class Fees and Deposits for ASU Main and ASU East" table, page 46.

**Student Recreation Complex Fee.** All students (except university employees) who take at least one class at ASU Main must pay a mandatory Student Recreation Complex fee. Full-time (seven or more hours) students are charged \$25 per semester. Part-time students pay \$12 per semester, and summer students pay \$2 per semester hour. See the current semester *Schedule of Classes* for more information.

**Financial Aid Trust Fee.** All students must pay a financial aid trust fee. Full-time (seven or more hours) students are charged no more than one percent of the current tuition. The fee for students enrolled six or fewer hours is half that charged full-time students. The total summer sessions fee does not exceed the amount for a full-time student. Fees collected from students are matched by the State of Arizona

## 1999–2000 Resident and Nonresident Tuition

Hours	Resident*	Nonresident*
1	\$ 115.00	\$ 389.00
2	230.00	778.00
3	345.00	1,167.00
4	460.00	1,556.00
5	575.00	1,945.00
6	690.00	2,334.00
7	1,094.00	2,723.00
8	1,094.00	3,112.00
9	1,094.00	3,501.00
10	1,094.00	3,890.00
11	1,094.00	4,279.00
12 or more	1,094.00	4,670.00

\* In addition to tuition, students are charged other fees (e.g., the Student Recreation Complex fee and financial aid trust fee).

and used to create a Financial Aid Trust Fund, from which student grants are awarded under the usual financial aid eligibility criteria available at the ASU Student Financial Assistance office in the Student Services Building.

**Arizona Students' Association (ASA) Fee.** The ASA is a nonprofit lobbying organization that represents Arizona's public university students to the Arizona Board of Regents, State Legislature, and U.S. Congress. During 1997, students at the state universities voted to change the mechanism for funding the ASA. A \$1 fee is charged to each student each semester. Any refunds for this fee are provided through the ASA Central Office at 480/966-6358.

**Late Registration.** The fee assessed on registrations on or after the first day of each session is \$35. A \$35 late fee is also assessed on registration payments received after the fee payment deadline but processed before the class enrollment purge.

**Admission Application.** The nonrefundable fee for degree applications is \$45. The nonrefundable fee for nondegree or readmission applications \$15.

**Transcripts.** The Office of the Registrar releases official transcripts *only upon the written request of the student*. The request must include the following information:

1. the student's name and former name(s);
2. the student ID number;
3. the date of birth; and
4. the dates of attendance.

The request for official transcript form is available online at [www.asu.edu/registrar/forms](http://www.asu.edu/registrar/forms).

The Office of the Registrar does not issue a transcript if the student has a financial records hold. The student must supply a specific address if the transcript is to be mailed. The fee for an official transcript for a student not enrolled is \$5 for the first copy. Additional copies ordered at the same

time are \$1 each. The fee is \$1 per copy for a student enrolled for a current or future semester.

Unofficial transcripts may be requested in person at the Office of the Registrar, any registrar site, or by mail or fax (480/965-2295) if a signed release is enclosed. There is no charge for an unofficial transcript.

**Private Music Instruction.** The fee for one-half hour of instruction weekly is \$40. The fee for one hour of instruction weekly is \$60. The fee for more than one hour of instruction weekly—for music majors only—is \$60.

**Musical Instrument Rental Charge.** The charge for use of university-owned musical instruments is \$25. Consult the School of Music for specific information.

**Binding and Microfilm Fees.** The binding fee for a thesis or dissertation is \$17 per copy. This fee is subject to change. Additional charges may be required depending on the size and nature of the document. The dissertation microfilming fee is \$50, and is subject to change.

**Sun Card/ID Card.** The replacement fee is \$10.

**Parking Decals.** A parking decal must be purchased, in person or by using the Park Smart touch-tone telephone system 480/921-PARK (7275), for motor vehicles parked on campus except in areas where metered parking or visitor lots are available. Photo identification is required. Annual decals range from \$50 to \$129 for controlled access parking. Decals are sold on a first come, first served basis. For more decal sales information, call 480/965-6124 or visit the Web site at [www.asu.edu/dps/pts](http://www.asu.edu/dps/pts).

Each vehicle registered at ASU Parking and Transit Services must comply with Arizona emission standards (A.R.S. § 15-1627G) during the entire registration period. The fee for this emission inspection is \$25 to \$35 per vehicle.

Everyone is encouraged to support travel reduction measures by using mass transit, the university shuttle bus, carpooling, bicycling, or walking whenever possible. See “Transportation,” this page, for more information.

**Parking Violations.** Due to a high demand for parking, regulations are strictly enforced. Fines range from \$10 to \$100. Appeals to parking citations may be filed within 14 calendar days to Parking and Transit Services and, after payment, may be further appealed to the Parking Citation Appeals Board. Unpaid parking citations are delinquent financial obligations subject to the provisions of the “Delinquent Financial Obligations,” page 44. The vehicle of any person owing three or more unpaid parking citations or \$100 in unpaid parking citations is subject to impoundment. An \$85 minimum fee is assessed if impoundment is required. For more information, call 480/965-4527.

**Returned Checks.** Checks returned by a bank are assessed a \$15 service charge with repayment needed within five business days of notification. A second \$15 service charge is made if the returned check is not repaid within this five-day period. Repayment of a returned check must typically be in cash.

The university may have arrangements with its bank to redeposit automatically for a second time checks for which there are insufficient funds. No service charge is assessed by ASU until a check is returned to ASU; however, the payer may be assessed a service charge by the payer’s financial institution.

Students paying registration fees and tuition with a check that is subsequently not honored by a financial institution are subject to involuntary withdrawal from the university if repayment is not made. All students involuntarily withdrawn are charged tuition and/or registration fees according to the standard refund schedule as of the involuntary withdrawal date, as determined by the university.

**On-Campus Housing.** The cost of ASU Main housing varies. In 1998–99 the most typical cost was \$2,780 per academic year. Meal plans are purchased separately. For more information, see “Residential Life” in the *General Catalog*, or call 480/965-3515.

## TRANSPORTATION

To reduce air pollution and traffic congestion, students are encouraged to travel to and from campus by means other than automobile. Nearby on-campus parking is limited and tightly controlled.

Alternative transportation modes are used by thousands of ASU students. ASU is served by a Phoenix-area regional bus service; monthly and reduced-fare semester passes are available on campus. In addition, an inexpensive express shuttle runs between ASU Main in Tempe and ASU West in northwest Phoenix; another shuttle runs among ASU Main, Mesa Community College, and ASU East in Mesa; and a Free Local Area Shuttle (FLASH) is available around the periphery of ASU Main.

Bicycle ridership at ASU is estimated to be more than 15,000 students daily. Ample racks in many locations enable the parking and securing of bicycles. Bicycle use is restricted only in those areas of campus where pedestrian traffic is sufficiently heavy to make such use a hazard. The Bike Co-op Repair Service provides assistance with bicycle maintenance.

Also, careful class scheduling, when possible, can reduce a student’s transportation needs. For more information on commute alternatives, call 480/965-1072.

## PAYMENT METHODS AND DEADLINES

**InTouch.** The InTouch system, at 480/350-1500, allows students to register for classes, to drop/add, and to make fee payment from any touch-tone phone. Students paying fees with available financial aid, debit cards, Visa, or MasterCard must use the InTouch system. Refer to the *Schedule of Classes* for available dates and times and more information about the InTouch system.

**Debit/Credit Cards.** ASU accepts debit cards, Visa, and MasterCard. Debit/credit card payments through InTouch are processed online with the bank. See the *Schedule of Classes* for information about using debit/credit cards by mail or campus payment boxes.

**Check.** Checks payable for the exact amount of charges and without a restrictive endorsement are generally acceptable, except for students on check use suspension due to a previously returned check.

**Financial Aid.** Students receiving financial aid may use their expected aid to pay university charges, including tuition and fees. Students who wish to do so must follow specified procedures. See the current semester *Schedule of Classes* for more information.

**Veterans Deferred Payment.** The Veterans Readjustment Assistance Act allows veterans to apply for deferred payment of registration fees, books, materials and supplies required for courses. To assist eligible students, a Veteran Promissory Note may be issued deferring payment during their first semester of benefits. Contact the Veterans Services Section at SSV 148 or call 480/965-7723 for information on meeting the necessary requirements. The university may deny this privilege with previous delinquent obligations.

**Payment Deadlines.** Fees must be paid by the deadline dates and times indicated or the registration is voided. A fee payment deadline is printed on all Schedule/Billing Statements and in the *Schedule of Classes*.

## REFUNDS

**Academic Year Resident and Nonresident Tuition.** Students withdrawing from school or individual classes receive a refund as described in the “Fall and Spring Withdrawal Refunds” table:

### Fall and Spring Withdrawal Refunds

Withdrawal Date	Refund
Before first day of the semester	100%*
One through 7 calendar days	80%
8 through 14 calendar days	60%
15 through 21 calendar days	40%
22 through 28 calendar days	20%
After the 28th calendar day	No refund

\* A \$35 processing fee is subtracted per session.

The university provides a prorated refund for first-time students receiving financial aid; therefore, the refund schedule is the minimum amount refundable to these students.

Withdrawal occurs on the calendar day that withdrawal is requested, either in person at a registrar site or by phone using InTouch, the ASU touch-tone telephone system for registration and fee payment. Students withdrawing for medical or other extenuating circumstances must contact their college for refunds that may be available under these circumstances.

**Summer Sessions Fees.** Students withdrawing from any summer session or individual classes receive a refund as described in the “Summer Sessions Withdrawal Refunds” table. *Refunds are based on the session days and not the class meeting dates for any particular class.*

### Summer Sessions Withdrawal Refunds

Withdrawal Dates	Refunds
Before first day of session	100%*
First and second days of session	80%
Third day of session	60%
Fourth day of session	40%
Fifth day of session	20%
After fifth day of session	No refund

\* A \$35 processing fee is subtracted per session.

**Special Class Fees and Deposits.** After the first week of classes, refunds, if any, are determined only by the department or school offering the course. Refund determination is

based on withdrawal date, type of activity, and costs already assessed by the department or school.

**Private Music Instruction.** If a student must drop a music course because of illness or other emergency beyond the student’s control, not more than half of the instruction charge may be refunded, as determined by the School of Music.

**Late Registration.** This fee is not refundable.

**Student Recreation Complex Fee.** This fee is refundable only upon complete withdrawal in percentage increments per the refund schedule.

**Financial Aid Trust Fee.** This fee is not refundable.

**Official Transcripts.** Overpayments by mail of \$5 or less are only refunded by specific request.

**Graduation Fee.** Overpayments by mail of \$5 or less are refunded only by specific request.

**Residence Halls.** Refunds to students departing from ASU Main residence halls before the end of the academic year are computed on the following basis.

**Charges and Deposits.** Housing payments and deposits are refunded as prescribed by the Residential Life License Agreement that students sign when they apply for residence hall accommodations. Students should refer to this document and the Schedule of Charges and Deadlines for specific information on refunds.

**Other University Charges.** Other university charges are normally not refundable, except for individual circumstances.

**Payment of Refunds.** Refunds require student identification and are made payable only to the student for the net amounts due the university. When the last day of a refund period falls on a weekend or holiday, a withdrawal form must be submitted to one of the registrar sites during operating hours on the workday preceding the weekend or holiday. Refunds are normally paid by check, payable to the student, and are mailed to the student’s local address.

**Parking Decals.** Prorated refunds are available through the last business day in April.

**Forfeiture of Refunds.** Refunds are subject to forfeiture unless obtained within 90 days of the last class day of the semester for which the fees were originally paid.

## DELINQUENT FINANCIAL OBLIGATIONS

Arizona Board of Regents’ Policy 4-103B, which applies to ASU, states the following:

1. Each university shall establish procedures to collect outstanding obligations owed by students and former students.
2. Each university shall maintain a system to record all delinquent financial obligations owed to that university by students and former students.
3. Students with delinquent obligations shall not be allowed to register for classes, purchase parking decals, receive cash refunds, or obtain transcripts, diplomas, or certificates of program completion. The university may allow students to register for

classes, obtain transcripts, diplomas, or certificates of program completion if the delinquent obligation is \$25 or less.

4. Unpaid obligations shall remain a matter of record until students and former students satisfy their financial obligations or until satisfactory arrangements for repayment are made with the university.
5. The university may write off delinquent financial obligations of students according to accepted accounting principles and after appropriate collection efforts. No such write-off shall operate to relieve the student of liability for the obligation nor shall such write-off entitle the student to release of any transcripts, diplomas, certificates of program completion, or to register for further university classes until such obligation is actually paid.
6. Each university shall include this policy in its bulletin or catalog.

A late charge of \$10 is made for any balances due the university not paid within 30 days of the initial due date, with a second \$10 late charge being made if these amounts are not paid within 30 days of the first late charge. Procedures to be followed for disputed charges are available from the Accounts Receivable Section of the Business Services Office, located in ADM A109.

### RESIDENCY CLASSIFICATION PROCEDURES AND POLICIES

The Arizona Board of Regents is required by law to establish uniform guidelines and criteria for classifying students' residency to determine those students who must pay nonresident tuition. The following is a summary of the general guidelines used to determine residency for tuition purposes. All of the evidence is weighed under the presumption that a nonresident student's presence in Arizona is primarily for the purpose of education and not to establish domicile and that decisions of an individual about the intent to establish domicile are generally made after the completion of an education and not before.

To obtain resident status for tuition purposes, independent students must establish their residence in Arizona at least one year immediately before the last day of regular registration for the semester in which they propose to attend ASU. Arizona residence is generally established when individuals are physically present in the state with the intention of making Arizona their permanent home.

Mere physical presence in Arizona for one year does not automatically establish residency for tuition purposes. Adult students and emancipated minors must combine physical presence in Arizona for one year with objective evidence of their intent to make Arizona their permanent home. If these steps are delayed, the one-year period is extended until both presence and intent have been demonstrated for one full year. In addition to physical presence and intent, the student must demonstrate financial independence for the two tax years immediately preceding the request for resident classification. The student must demonstrate objective evidence of self-support and that he or she was not claimed as an income tax deduction by his or her parents or any other individual for two years. An adult student is defined as being at least 18 years of age at the beginning of the domicile year. For a complete definition of an emancipated minor, refer to the Arizona Board of Regents' residency classification poli-

cies, available in the Residency Classification Section, SSV B115.

No person is considered to have gained or lost resident status merely by attending an out-of-state educational institution.

**Aliens.** Students who are aliens are subject to the same requirements for resident status as are U.S. citizens. In establishing domicile, aliens must not hold a visa that prohibits establishing domicile in Arizona.

**Refugees.** Refugees may qualify as resident students by virtue of having been granted refugee status in accordance with all applicable laws of the United States and having met all other requirements for residence in Arizona.

### Exceptions to the General Residency Rule

Students may be eligible for resident status for tuition purposes if they can meet one of the following criteria on or before the last day of regular registration.

**Legal Dependents.** If a student and his or her parents are domiciled in Arizona and have not met the one-year residency requirement but the parents are entitled to claim the student as a dependent for federal and state tax purposes, the student may be eligible for resident status for tuition purposes.

**Transferred Employees.** If students are domiciled in Arizona and have not met the one-year residency requirement but are employees or spouses of employees who have been transferred to Arizona by their employers for employment purposes, the students may be eligible for resident status for tuition purposes.

**Members of the Military.** If students are not domiciled in Arizona but are members of the U.S. Armed Forces stationed in Arizona or are the spouses or dependent children of a member (as defined in A.R.S. § 43-1001), the students may be eligible for resident status for tuition purposes. If military service is concluded while they are enrolled, students do not lose resident status while they are continuously enrolled in a degree program. If individuals are domiciled in Arizona immediately before becoming members of the U.S. Armed Forces, they do not lose resident status because of their absence while on active duty with the military as long as they maintain Arizona affiliations and file Arizona state tax.

**Native Americans.** Students who are members of a Native American tribe whose reservation lies both in Arizona and an adjacent state and who are residents of that reservation may be eligible for resident status for tuition purposes.

### Procedures for Establishing Residency Status

All students are responsible for obtaining residency classification for tuition purposes before registering and paying their fees. This procedure requires students to complete and file a domicile affidavit form. This form is required of all new and returning students as part of the admission or readmission process. Students classified as nonresidents who believe they may qualify for resident status must file a petition with the Residency Classification Section. This petition must be filed by the last day of regular registration. A student seeking resident status must also file supporting documentation necessary to provide a basis for resident classification (source[s] of support, driver's license, voter's

registration, vehicle registration, etc.). Students whose residency petitions are in process at the fee payment deadline are responsible for paying nonresident tuition and fees. However, an appropriate refund is issued if residency is later granted for that semester.

Any student found to have made a false or misleading statement concerning residency or tuition status is subject to dismissal from the university.

Failure to file a timely written petition for reclassification of residency status for tuition purposes constitutes a waiver of the student's right to apply for the given semester. Peti-

tion deadlines are published each semester in the *Schedule of Classes*. Extensions to the deadlines are not permitted.

Residency classification is an extremely complex issue. The information presented here is a summary and does not address each individual's situation; therefore, students are encouraged to make a personal visit to the Residency Classification Section to discuss their individual circumstances as soon as possible. Guidelines for determination of residency for tuition purposes are subject to review and change without notice. For more information, call the Residency Classification Section at 480/965-7712 or refer to [www.asu.edu/registrar/residency](http://www.asu.edu/registrar/residency) on the Web.

### Special Class Fees and Deposits for ASU Main and ASU East

#### Special Fees<sup>1</sup>

ADE 510 Foundation Architectural Studio.....	175.00
ADE 511 Core Architectural Studio I.....	175.00
ADE 512 Core Architectural Studio II.....	175.00
ADE 521 Advanced Architectural Studio I.....	175.00
ADE 522 Advanced Architectural Studio II.....	175.00
ADE 621 Advanced Architectural Studio III.....	175.00
ADE 622 Advanced Architectural Studio IV.....	175.00
ART 401 Nonsilver Photography.....	30.00
ART 403 Senior Photographic Projects.....	25.00
ART 404 Portraiture Photography.....	25.00
ART 405 Advanced Color Photography.....	35.00
ART 407 View Camera.....	25.00
ART 414 Advanced Life Drawing.....	25.00
ART 415 Art Anatomy.....	20.00
ART 425 Advanced Figure Painting.....	25.00
ART 427 Advanced Watercolor.....	45.00
ART 431 Special Problems in Sculpture.....	40.00
ART 432 Neon Sculpture.....	45.00
ART 436 Architectural Sculpture.....	40.00
ART 437 Film Animation.....	25.00
ART 438 Experimental Systems in Sculpture.....	40.00
ART 446 Computer Art II.....	35.00
ART 452 Advanced Lithography.....	40.00
ART 454 Advanced Screen Printing.....	35.00
ART 455 Advanced Photo Processes for Printmaking.....	30.00
ART 456 Fine Printing and Bookmaking I.....	30.00
ART 457 Fine Printing and Bookmaking II.....	30.00
ART 458 Papermaking.....	20.00
ART 459 Monoprinting.....	20.00
ART 460 Ceramic Clay.....	25.00
ART 463 Ceramic Glaze.....	25.00
ART 466 Special Problems in Ceramics.....	25.00
ART 472 Advanced Jewelry.....	15.00
ART 473 Advanced Metalworking.....	15.00
ART 474 Advanced Wood.....	25.00
ART 476 Fibers: Multiple Harness Weaving.....	25.00
ART 477 Printed Textiles.....	30.00
ART 494 ST: Advanced Sculpture.....	20.00
ART 494 ST: Carving.....	25.00
ART 494 ST: Experimental Paper.....	25.00
ART 494 ST: Experimental Printmaking.....	30.00
ART 494 ST: Fibers and Surface.....	25.00
ART 494 ST: Foundry Casting Methods.....	40.00
ART 494 ST: Print Textiles.....	25.00
ART 494 ST: Relief Printmaking.....	35.00
ART 494 ST: Turning.....	25.00
ART 494 ST: Vapor Glazes.....	15.00
ART 498 PS: Landscape Photography: Theory.....	25.00
ART 551 Intaglio Projects.....	40.00
ART 594 ST: Turning.....	25.00

#### Special Fees<sup>1</sup>

ART 598 ST: Advanced Color Photography.....	35.00
ART 598 ST: Advanced Screen Printing.....	35.00
ART 598 ST: Advanced Sculpture.....	20.00
ART 598 ST: Architectural Sculpture.....	40.00
ART 598 ST: Art Anatomy.....	20.00
ART 598 ST: Ceramic Clay.....	25.00
ART 598 ST: Ceramic Glaze.....	25.00
ART 598 ST: Dimensional Animation.....	25.00
ART 598 ST: Experimental Paper.....	25.00
ART 598 ST: Experimental Printmaking.....	30.00
ART 598 ST: Experimental Systems in Sculpture.....	40.00
ART 598 ST: Fibers and Surface.....	25.00
ART 598 ST: Figure Painting.....	25.00
ART 598 ST: Fine Printing and Bookmaking I.....	30.00
ART 598 ST: Fine Printing and Bookmaking II.....	30.00
ART 598 ST: Foundry Casting Methods.....	40.00
ART 598 ST: Jewelry Metalworking.....	15.00
ART 598 ST: Life Drawing.....	20.00
ART 598 ST: Lithography.....	40.00
ART 598 ST: Monoprinting.....	20.00
ART 598 ST: Neon Sculpture.....	45.00
ART 598 ST: Nonsilver Photography.....	30.00
ART 598 ST: Papermaking.....	20.00
ART 598 ST: Photo Processes for Printmaking I.....	25.00
ART 598 ST: Portraiture Photography.....	25.00
ART 598 ST: Print Textiles.....	25.00
ART 598 ST: Printed Textiles.....	30.00
ART 598 ST: Relief Printmaking.....	35.00
ART 598 ST: Screen Printing.....	35.00
ART 598 ST: Special Problems in Ceramics.....	25.00
ART 598 ST: Special Problems in Sculpture.....	40.00
ART 598 ST: View Camera.....	35.00
ART 598 ST: Watercolor.....	45.00
ART 598 ST: Wood.....	25.00
ART 621 Studio Problems: Ceramics.....	25.00
ART 621 Studio Problems: Jewelry Metalworking.....	15.00
ART 621 Studio Problems: Printmaking.....	25.00
BIO 410 Techniques in Wildlife Conservation Biology.....	45.00
BIO 426 Limnology.....	20.00
BIO 453 Animal Histology.....	5.00
BIO 471 Ornithology.....	15.00
BIO 472 Mammalogy.....	15.00
BIO 473 Ichthyology.....	15.00
BIO 474 Herpetology.....	15.00
BIO 502 Transmission Electron Microscopy.....	20.00
BIO 505 Scanning Electron Microscopy.....	20.00
BUS 502 Managerial Communication.....	8.00
CHM 424 Separation Science <sup>2</sup> .....	25.00
CHM 431 Qualitative Organic Analysis <sup>2</sup> .....	25.00
CHM 452 Inorganic Chemistry Laboratory <sup>2</sup> .....	25.00
CHM 467 General Biochemistry Laboratory <sup>2</sup> .....	25.00

Special Class Fees and Deposits for ASU Main and ASU East (continued)

**Special Fees<sup>1</sup>**

CHM 480	Methods of Teaching Chemistry <sup>2</sup> .....	25.00
CHM 593	Applied Project: Glass Blowing <sup>2</sup> .....	25.00
COM 584	Communication Internship.....	20.00
DSC 525	Design Methodologies.....	175.00
EDP 560	Individual Intellectual Assessment.....	12.50
EED 578	Student Teaching in the Elementary School.....	25.00
EED 598	ST: Using Math Manipulatives/ Elementary Schools.....	5.00
EED 598	ST: Using Math Manipulatives/Middle Schools.....	5.00
EPD 700	Interdisciplinary Research Methods.....	175.00
EPD 710	Current Research in Design.....	175.00
EPD 712	Current Research in Planning.....	175.00
EPD 714	Current Research in History, Theory, and Criticism.....	175.00
EPE 505	Applied Exercise Physiology Techniques.....	15.00
FON 442	Experimental Foods.....	15.00
FON 445	Quantity Food Production.....	15.00
FON 446	Human Nutrition Assessment Lecture/Laboratory.....	25.00
FON 598	ST: Research Methods in Nutrition.....	15.00
GLG 405	Geology of the Moon.....	10.00
GLG 406	Geology of Mars.....	10.00
GLG 420	Volcanology.....	35.00
GLG 424	Petrology.....	5.00
GLG 435	Sedimentology.....	15.00
GLG 436	Principles of Stratigraphy.....	20.00
GLG 441	Ore Deposits.....	20.00
GLG 455	Advanced Field Geology.....	35.00
GLG 456	Cordilleran Regional Geology.....	10.00
GLG 490	Topics in Geology: Clastic Sedimentology and Petrology.....	20.00
GLG 490	Topics in Geology: Moon.....	10.00
GLG 490	Topics in Geology: Pyroclastic Rocks.....	25.00
GLG 490	Topics in Geology: Remote Sensing.....	10.00
GLG 490	Topics in Geology: Volcano.....	25.00
GLG 510	Advanced Structural Geology.....	10.00
GLG 520	Advanced Physical Volcanology (fall only).....	35.00
GLG 524	Advanced Igneous Petrology.....	20.00
GLG 525	Advanced Metamorphic Petrology.....	5.00
GLG 591	Volcanology.....	35.00
GLG 598	ST: Advanced Field Geology.....	35.00
GLG 598	ST: Clastic Sedimentology and Petrology.....	20.00
GLG 598	ST: Cordilleran Regional Geology.....	10.00
GLG 598	ST: Geology of Mars.....	10.00
GLG 598	ST: Ore Deposits.....	20.00
GLG 598	ST: Petrology-Petrography.....	5.00
GLG 598	ST: Principles of Stratigraphy.....	20.00
GLG 598	ST: Sedimentology.....	15.00
GLG 598	ST: Volcanology.....	35.00
GPH 418	Landforms of the Western United States.....	20.00
GPH 491	Geographic Field Methods.....	20.00
GRA 481	Visual Communication V.....	175.00
GRA 482	Visual Communication VI.....	175.00
IEE 591	Seminar: Manufacturing Strategy.....	50.00
IEE 591	Seminar: Effects of Economics/ New Products Market.....	50.00
IEE 591	Seminar: Strategic Product Development.....	50.00
IEE 591	Seminar: New Product Strategic.....	50.00
IND 460	Design Project I.....	175.00
IND 461	Design Project II.....	175.00

**Special Fees<sup>1</sup>**

INT 466	Interior Design Studio V.....	175.00
INT 467	Interior Design Studio VI.....	175.00
JUS 584	Internship.....	20.00
MIC 421	Experimental Immunology.....	20.00
MIC 470	Bacterial Diversity and Systematics.....	25.00
MUP 511	Studio Instruction.....	60.00
MUP 521	Studio Instruction.....	40.00
MUP 527	Studio Instruction.....	60.00
MUP 727	Studio Instruction.....	60.00
NUR 559	Advanced Health Assessment.....	45.00
NUR 580	Advanced Nursing Practicum I, II.....	45.00
PLA 461	Landscape Architecture V.....	175.00
PLB 404	Phycology.....	25.00
PLB 420	Plant Ecology: Organisms and Populations.....	25.00
PLB 421	Plant Ecology: Communities and Ecosystems.....	25.00
PLB 472	Greenhouse/Nursery Management.....	25.00
PUP 572	Planning Studio I: Data Inventory and Analysis.....	175.00
PUP 574	Planning Studio II: Options and Implementation.....	175.00
SED 578	Student Teaching in the Secondary Schools.....	25.00
SED 598	ST: Using Math Manipulatives/Middle Schools.....	5.00
THP 440	Advanced Scene Design.....	5.00
THP 441	Scene Painting.....	20.00
THP 444	Drafting for the Stage.....	5.00
THP 445	Advanced Lighting Design.....	5.00
THP 506	Scenography.....	5.00
THP 512	Puppetry Workshop.....	10.00

**Deposits**

ADE 510	Foundation Architectural Studio.....	25.00
ADE 511	Core Architectural Studio I.....	25.00
ADE 512	Core Architectural Studio II.....	25.00
ADE 521	Advanced Architectural Studio I.....	25.00
ADE 522	Advanced Architectural Studio II.....	25.00
ADE 621	Advanced Architectural Studio III.....	25.00
ADE 622	Advanced Architectural Studio IV.....	25.00
CHM 424	Separation Science <sup>2</sup> .....	25.00
CHM 431	Qualitative Organic Analysis <sup>2</sup> .....	20.00
CHM 452	Inorganic Chemistry Laboratory <sup>2</sup> .....	20.00
CHM 525	Spectrochemical Methods of Analysis <sup>2</sup> .....	25.00
CHM 526	X-ray Methods of Analysis <sup>2</sup> .....	25.00
CHM 527	Electrical Methods of Chemical Analysis <sup>2</sup> .....	25.00
DSC 593	Applied Projects.....	25.00
DSC 599	Thesis.....	25.00
GRA 481	Visual Communication V.....	25.00
GRA 482	Visual Communication VI.....	25.00
GRA 485	Graphic Design Workshop.....	25.00
IND 460	Design Project I.....	25.00
IND 461	Design Project II.....	25.00
INT 466	Interior Design Studio V.....	25.00
INT 467	Interior Design Studio VI.....	25.00
PLA 461	Landscape Architecture V.....	25.00
PUP 572	Planning Studio I: Data Inventory and Analysis.....	25.00
PUP 574	Planning Studio II: Options and Implementation.....	25.00

**Class Fees Paid in Class or at Location Listed**

AMT 400	Flight Safety IV <sup>3</sup>	
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Financing Options Available

<sup>1</sup> For information on refunds, see "Refunds," page 44. For ASU West classes, see the *ASU West Catalog*.

<sup>2</sup> Chemistry classes may also carry a nonrefundable special class fee.

<sup>3</sup> Fees are variable and paid directly to contractor for rental of aircraft.

# Financing Graduate Studies

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Financial assistance for graduate study consists of scholarships, fellowships, assistantships, student loans, and work-study. Assistance can come from the university, private sources, and/or the federal government. The Graduate College Financial Assistance Office provides information and assistance to graduate and professional students. Students can also access the Web site for more information at [www.asu.edu/graduate/gradaid](http://www.asu.edu/graduate/gradaid) or send e-mail to [gradaid@asu.edu](mailto:gradaid@asu.edu). For more information, see "Assistantships and Associateships," page 96.

## UNIVERSITY SCHOLARSHIP AND FELLOWSHIP PROGRAMS

ASU offers several university-sponsored awards and scholarships for which both the Graduate College and the academic units conduct nominations and selections. To be considered for any of these award programs, students must apply directly to their academic department.

**Regents Graduate Academic Scholarships.** These scholarships are available on a competitive basis to graduate students with outstanding academic records. This scholarship covers the *resident tuition only (not nonresident tuition)* and is granted for the academic year or one semester only (not including summer sessions). Students must reapply to the academic unit every year.

Applicants must be regularly admitted to a graduate degree program; continuing students must also be in good standing (3.00 postbaccalaureate GPA at ASU). A graduate student may be nominated for this scholarship by the head of the student's academic unit. Application forms and further information may be obtained from each academic unit. Forms are also available from the Graduate College. Applications should be completed and returned to the academic unit. *The Graduate College does not accept direct applications. Applicants must meet deadlines established by the academic units and the Graduate College.*

**Regents Graduate Tuition Scholarships.** These scholarships are available on a competitive basis to nonresident graduate students with outstanding academic records. *This scholarship is granted for the academic year or one semester only (not including summer sessions).* Graduate students awarded with this scholarship pay the resident tuition. Applicants must be regularly admitted to a graduate degree program; continuing students must also be in good standing (3.00 postbaccalaureate GPA at ASU). Application forms and further information may be obtained from each academic unit. Forms are also available from the Graduate College. Applications should be completed and returned to the academic unit. *The Graduate College does not accept direct applications. Applicants must meet deadlines established by their academic unit and the Graduate College.*

**University Graduate Fellows Program.** This program offers competitive three-year merit packages that include scholarships ranging from \$1,000 to \$4,500, an annual stipend, plus waiver of resident and nonresident tuition. This fellowship program is for outstanding new graduate students with high credentials such as GRE scores, GPA, publi-

cations, and prestigious awards. Applicants should contact the academic unit for information.

**Herman E. DeMund Memorial Scholarship.** This scholarship is an annual award of \$2,000 for a deserving graduate student at ASU. Students who are regularly admitted to a graduate degree program are eligible to be nominated for this award. Nominations are made by the heads of the individual academic units to the Graduate College, and the recipient is chosen from these nominees. The selection for this award is made on the basis of scholastic ability.

**Phelps Dodge Scholarships.** Two graduate scholarships of \$5,000 are awarded to regularly admitted graduate students who are residents of Arizona and graduates of ASU. Awards for any academic year are limited to (1) a student chosen from the engineering student body for advanced study in mining, geology, metallurgy, or other fields allied with or pertaining to the mineral industry, or, if no suitable candidate is available for postgraduate study in these fields, for advanced study in any engineering field, and (2) a student chosen from the student body for advanced study in any field that the student may select and for which he or she may be qualified. Nominations are made by the head of the individual academic unit to the Graduate College and the recipients are chosen from those nominees. The selection for these awards is made on the basis of academic achievement.

**James J. Sweitzer Memorial Scholarship.** This scholarship provides a stipend of \$1,200 to \$1,500 to a graduate student in Agribusiness. Regularly admitted graduate students planning a career in agribusiness are eligible to apply as first- or second-year students. The selection committee considers financial needs but gives preference to high scholarship and potential in the field.

**Reiganji Graduate Scholarship Fund.** This scholarship fund offers \$1,400 annual scholarships plus waiver of resident and nonresident tuition to students majoring in East Asian history and philosophy.

**Travel and Research Grants.** The Graduate College collaborates with the Graduate Student Research Office to fund small grants to support graduate student research. These grants usually are made to defray expenses incurred by students completing their theses or dissertations. The Graduate College funds travel grants for doctoral students who wish to present their research results at regional and national conferences. Meeting scholars in their fields and participating with faculty in professional organizations presents opportunities for students to get involved in activities that will become central to their professional lives.

## PRIVATE FELLOWSHIPS AND AWARDS

ASU attracts a large number of graduate students who are honored with external sources of assistance such as national research fellowships and prestigious, private scholarships. In addition, the Graduate College assists in nominating graduate students for national competitions and provides support services to the recipients. These awards are targeted by academic discipline and/or student category.

**Achievement Rewards for College Scientists.** Scholarships are given to gifted and needy scholars in the natural sciences, medicine, and engineering to complete their career preparation. The annual award is \$6,000 in addition to resident and nonresident tuition waivers. Students must be nominated through their major department.

**Philanthropic Educational Organization National Scholarship Award.** This award is offered to outstanding women doctoral students. The successful applicant receives a cash stipend of \$7,000, matched by tuition remission. The award is renewable for a second year. Students must be nominated through their major department.

**Ford Foundation Predoctoral Fellowship.** This fellowship provides an annual stipend of \$14,000 for three years with tuition scholarships from ASU. The program supports fellows in research-based doctoral programs.

**Jacob K. Javits Fellowship Program.** This fellowship program offers an annual stipend of \$14,400 based on a fellow's need with tuition scholarships from ASU. This program is designed to assist students of superior ability to pursue studies leading to a doctoral or master's degree in fine arts.

**National Science Foundation Graduate Fellowships and Minority Graduate Fellowships.** These fellowships provide a stipend of \$14,400 for 12-month tenures. ASU provides additional tuition scholarships to fellows beginning their graduate study in science, mathematics, and engineering.

**National Consortium for Graduate Degrees for Minorities in Engineering and Science, Inc. (GEM).** This fellowship program offers opportunities for underrepresented ethnic minority students to obtain master's degrees in engineering, through a program of paid summer internships and graduate financial assistance. Fellowships consist of a stipend of \$6,000 per academic year; when combined with the summer internship, the total value is between \$20,000 and \$40,000. ASU provides additional support to GEM fellows with tuition scholarships for both resident and nonresident tuition.

**Other Forms of Scholarship Support.** Students are encouraged to contact the academic unit in which they intend to study and the Graduate College Financial Assistance Office to determine if other sources of support are available.

The Graduate College publishes *Grad News* ([www.asu.edu/graduate/gradnews.htm](http://www.asu.edu/graduate/gradnews.htm)), a newsletter listing current grant and scholarship information. Reference books on national and regional scholarships for which students may be eligible are on reserve at Hayden Library. Announcements are available for review in the center lobby, Wilson Hall, and the Web at [www.asu.edu/graduate/gradnews.htm](http://www.asu.edu/graduate/gradnews.htm).

### NEED-BASED FINANCIAL AID

To be considered for need-based support, applicants must complete the Free Application for Federal Student Aid (FAFSA) or the Renewal FAFSA each year. U.S. citizens and permanent residents are eligible.

The FAFSA is available in a variety of formats.

1. The paper FAFSA is available after January 1 at any U.S. college or university, and the Graduate College Financial Assistance Office. The paper Renewal FAFSA is automatically mailed to the student from the federal processor if the student has applied for aid in the previous year. Both processes take about four to six weeks.
2. The electronic FAFSA is available through *FAFSA Express* and *FAFSA on the Web*. Both versions require that the student has access to a computer, modem and printer. A copy of the *FAFSA Express* software is available by calling 1-800-801-0576. *FAFSA on the Web* ([www.fafsa.ed.gov](http://www.fafsa.ed.gov)) allows the student to complete the application on the Web site. Both processes take approximately two weeks.

**Federal (College) Work-Study.** This federal, campus-based work program is administered by ASU. Awards for 1998–99 ranged from \$4,000 to \$5,000. All graduate students who apply for financial aid by the priority filing date of March 1 and demonstrate need are considered for this program. The student usually works 10 to 20 hours per week either on campus or for an off-campus, nonprofit agency to earn the award amount.

**Federal Perkins Loan.** This low-interest, long-term, federal, campus-based loan is administered by ASU. Awards for 1997–98 ranged from \$1,000 to \$3,000. Graduate students who apply by the March 1 priority filing date and demonstrate need are considered.

**William D. Ford Federal Direct Student Loans (Subsidized and Unsubsidized).** These long-term loans are available through the federal government. Students may borrow up to \$8,500 per academic year in a subsidized Federal Direct Loan. An additional unsubsidized Federal Direct Loan of up to \$10,000 per academic year may also be borrowed. Students applying for financial aid are automatically considered for this program.

### HIGHER EDUCATION TAX INCENTIVES

The Taxpayer Relief Act of 1997 provides assistance (Lifetime Learning Tax Credit) to graduate and professional students in meeting college expenses. For more information, visit the U.S. Department of Education Web site at [www.ed.gov](http://www.ed.gov).

### TAXABILITY OF FINANCIAL AID PROGRAMS

Scholarships, grants, fellowships, and stipends (but not loan funds) are taxable income to the recipient, except for the portion of these funds used for tuition and other university fees, or books, supplies, and equipment required for the courses being taken. Special tax regulations also apply to nonresident alien students and may require withholding of taxes at the time of aid disbursements to these individuals. Information on the taxability of scholarships can be obtained from the following Internal Revenue Service (IRS) publications and forms: *Publication 4—Student's Guide to Federal Income Tax*; *Publication 519—U.S. Tax Guide for Aliens*; *Publication 520—Scholarships and Fellowships*; Form 1040EZ and Instructions—Income Tax Return for Single and Joint Filers with no dependents; and Form 1040NR and Instructions—U.S. Nonresident Alien Income Tax Return.

These publications and forms can be obtained from the IRS at its toll-free number 1-800-829-FORM (3676). These publications and forms can also be accessed online at [www.irs.ustreas.gov/prod/forms\\_pubs](http://www.irs.ustreas.gov/prod/forms_pubs).

### **FINANCIAL AID FOR INTERNATIONAL STUDENTS**

International students are not eligible for Federal Financial Aid but can contact their academic department about Graduate Academic Scholarships and Graduate Tuition Scholarships. Each department or college has different deadline/eligibility requirements for these scholarships. Students may also contact their academic department about teaching, research, or graduate assistantships. Academic departments provide the appropriate forms to apply for these positions.

### **CAMPUS SERVICES AND ONLINE SERVICES**

Students can access personal information regarding financial aid by using FASTT Web at [www.asu.edu/fastt](http://www.asu.edu/fastt) or FASTT Phone at 480/968-4400. Students can check on

1. documents still needed to complete the financial aid file;
2. award information; and
3. financial aid forms in versions that can be printed and mailed or completed and sent across the Web.

For more information about financial assistance, visit the Graduate College Financial Assistance Office, located in the center lobby, Wilson Hall, or phone 480/965-3521.



Student Services Building at night

Tim Trumble photo

# Classification of Courses

## COURSE INFORMATION

Information about all lower- and upper-division courses offered at ASU Main and East appears in the *General Catalog*, published every spring. Classes scheduled for the current or upcoming fall or spring semester are listed in the *Schedule of Classes*, published before the beginning of registration. Classes scheduled for the summer sessions are listed in the *Summer Sessions Bulletin*, published every spring. The *Schedule of Classes* and *Summer Sessions Bulletin* are also available online at [www.asu.edu/registrar/schedule](http://www.asu.edu/registrar/schedule). Information about courses that apply toward graduate programs also appears in the *Graduate Catalog*, published annually. Information about lower- and upper-division courses offered at ASU West appears in the *ASU West Catalog*, published annually.

See the “Course Prefix Index,” page 10, for the location of all ASU courses by prefix.

## COURSE NUMBERING SYSTEM

**100–299 (Lower-Division) Courses.** Lower-division courses are designed primarily for freshmen and sophomores. Certain classes are closed to freshmen who lack the designated prerequisites or whose majors are outside the unit offering the course. This information is available in the *General Catalog*, in the *Schedule of Classes*, or from the student’s academic advisor.

**300–499 (Upper-Division) Courses.** Upper-division courses are designed primarily for juniors, seniors, and other advanced students. Prerequisites and other restrictions should be noted before registration. Courses at the 400 level apply to graduate degree requirements for individual programs of graduate study when approved by the Graduate College. See “Reserving of Course Credit by Undergraduates,” page 94.

**500–799 (Graduate-Level) Courses.** Graduate-level courses are designed for graduate students. However, an upper-division undergraduate student may enroll in these courses with the approval of the student’s advisor, the course instructor, the department chair, and the dean of the college in which the course is offered. If the course does not meet an undergraduate graduation requirement, it may be eligible for use in a future graduate program on the same basis as work taken by a nondegree graduate student. See “Reserving of Course Credit by Undergraduates,” page 94.

**Continuing Registration.** Courses numbered 595, 695, and 795, Continuing Registration, carry one semester hour of credit; however, the student receives neither credit nor grade for the course.

**Omnibus Courses.** The omnibus numbers are used for courses offered on an experimental or tutorial basis or for courses in which the content is new or periodically changes. Academic units use their own prefixes before omnibus course numbers. The general nature of the work required for a particular omnibus course is consistent from unit to unit, but subject matter varies. Omnibus courses are often offered for a variable number of semester hours. See the appropriate

academic unit in the *General Catalog* or major in the *Graduate Catalog* for the omnibus course listing under a subject area.

## OMNIBUS GRADUATE COURSE DESCRIPTIONS

### **500, 600, 700 Research Methods.** (1–12)

Course on research methods in a specific discipline.

### **580, 680, 780 Practicum.** (1–12)

Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.

### **583, 683, 783 Field Work.** (1–12)

Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.

### **584, 684, 784 Internship.** (1–12)

Structured practical experience following a contract or plan, supervised by faculty and practitioners.

### **590, 690, 790 Reading and Conference.** (1–12)

Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing synthesis of literature on a specified topic, writing literature review of a topic.

### **591, 691, 791 Seminar.** (1–12)

A small class emphasizing discussion, presentations by students, and written research papers.

### **592, 692 Research.** (1–12)

Independent study in which a student, under supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.

### **593, 693, 793 Applied Project.** (1–12)

Preparation of a supervised applied project that is a graduation requirement in some professional majors.

### **594 Conference and Workshop.** (1–12)

Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.

### **595, 695, 795 Continuing Registration.** (1)

Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending thesis or dissertation, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.

### **598 Special Topics.** (1–4)

Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.

### **599 Thesis.** (1–12)

Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.

### **792 Research.** (1–15)

Independent study in which a student, under supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.

### **799 Dissertation.** (1–15)

Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.

The preceding courses are described in announcements of the Graduate College and are also available in the respective departments. Under special circumstances, arrangements may be made at the dean’s request, through the approval of the senior vice president and provost, to increase the standard semester hours of credit.

**LAW 597, 697, and 797.** The numbers 597, 697, and 797 have been reserved for the Visiting Student Program in the College of Law.

**Prerequisites and Corequisites.** Some requirements, known as prerequisites, must be met *before* registering for a course. Other requirements, called corequisites, must be met *while* taking a course. A student registering for a course should be able to show that prerequisites have been met and that corequisites will be met as stated in the catalog or *Schedule of Classes* or must otherwise satisfy the instructor that equivalent preparation has been completed.

**International Program Courses.** Courses with the prefix IPO numbered 495 and 595 are reserved for International Programs study abroad and exchange programs. For most programs, participating students register for 18 semester hours. Following completion of an international program, undergraduate students receive credit for the study completed, with a minimum of 12 semester hours and a maximum of 18 semester hours, graduates with a minimum of six semester hours and a maximum of 12 semester hours.

IPO courses numbered 494 and 598 may be taken for one semester hour. Students register for these courses under the title "Study Abroad." At the conclusion of the program and

the transfer of overseas courses to the students' ASU records, a grade of "Y" is entered for the course.

For some special international programs, students register and receive credit for fewer semester hours.

#### Key to Course Listing Codes

Code	Definition
M	ASU Main and ASU East campus code*
W	ASU West campus code*
GLG	Example of a departmental prefix designation
410	Example of a course number
(3)	Example of course semester hours
F	Course offered fall only
S	Course offered spring only
SS	Course offered summer session only
F, S	Course offered both semesters
F 1999	Course offered every other year on semester indicated
A	Course offered once a year
N	Course not regularly offered

\* Campus codes are not used in the catalogs but appear in the *Schedule of Classes* and the *Summer Sessions Bulletin*.



Music Building

J. Cameron Maclsaac photo