

UNDERGRADUATE CATALOG 1989-91

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Appendix A Preprofessional Courses of Study in Law and the Health Fields

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I. CALENDAR

UNDERGRADUATE

*FALL SEMESTER, 1989

May 22-July 14	Touch Tone Telephone Registration For Fall Semester, 1989.
June 1	Tuesday. Deadline for Foreign Student admission applications for Fall 1989.
July 1	Saturday. Deadline for applying for admission and providing supporting documents for Fall 1989.
August 22	Tuesday. New Student Orientation.
August 23	Wednesday. New Student Orientation and New and Returning Former Student Registration.
August 24	Thursday. Late Registration.
August 28	Monday. Classes begin. Continuing Late Registration.
August 31	Thursday. Last day of Late Registration.
September 1	Friday. Last day to withdraw and receive an 80% refund of tuition and fees. Last day to add a class.
September 4	Monday. Labor Day Holiday.
September 11	Monday. Last day to withdraw and receive a 70% refund of tuition and fees.
September 13	Wednesday. Last day to: Drop or withdraw without a grade; choose credit/no-credit grading option; drop a class and receive a refund. Census date.
September 15	Friday. Last day to request excused absence for Religious Holy Day observance.
September 18	Monday. Last day for students to withdraw and receive a 50% refund of tuition and fees.
September 25	Monday. Last day to withdraw and receive a 25% refund of tuition and fees.
October 1	Sunday. Deadline for Fall 1989 degree candidates to apply for graduation.
October 15	Sunday. Spring 1990 deadline for filing Petition of Reinstatement for students who have been academically dismissed a second or subsequent time. Foreign Student admission application deadline for Spring Semester, 1990.
October 27	Friday. Last day for students to drop an individual course or withdraw from The University and receive an automatic "W".
November 23-25	Thursday-Saturday. Thanksgiving Holidays.
December 4	Monday. Last day to withdraw from The University.
December 11-16	Monday-Saturday. Final Examinations.
December 16	Saturday. Semester closes.

*SPRING SEMESTER, 1990

October 15	Sunday. Foreign Student admission application deadline for Spring Semester, 1990.
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*For a more detailed calendar of semester events, see the schedule of classes for each semester.

October 30- December 8 December 1	Touch Tone Telephone Registration for Spring Semester, 1990. Friday. Deadline for applying for admission and providing supporting documents for Spring 1990.
January 9 January 10	Tuesday. New Student Orientation. Wednesday. New and Returning Former Student Registration.
January 11	Thursday. Late Registration.
January 15	Monday. Classes begin. Continuing Late Registration.
January 16	Tuesday. Last day of Late Registration.
January 19	Friday. Last day to withdraw and receive an 80% refund of tuition and fees. Last day to add a class.
January 26	Friday. Last day to withdraw and receive a 70% refund of tuition and fees.
January 30	Tuesday. Last day to: Drop or withdraw without a grade; choose credit/no-credit grading option; drop a class and receive a refund. Census date.
February 1	Thursday. Deadline for Spring 1990 degree candidates to apply for graduation.
February 2	Friday. Last day for students to withdraw and receive a 50% refund of tuition and fees. Last day to request excused absence for Religious Holy Day observance.
February 9	Friday. Last day to withdraw and receive a 25% refund of tuition and fees.
March 1	Thursday. Foreign student admission application deadline for Summer 1990.
March 15	Thursday. Summer 1990 deadline for filing Petition for Reinstatement for students who have been dismissed a second or subsequent time.
March 16	Friday. Last day for students to drop an individual course or withdraw and receive an automatic "W".
March 19-24	Monday-Saturday. Spring Break.
April 30	Monday. Last day for all students to withdraw from The University.
May 7-12	Monday-Saturday. Final Examinations.
May 12	Saturday. Semester closes.
May 13	Sunday. Commencement.

***SUMMER SESSION, 1990**

March 1	Thursday. Foreign student admission application deadline for Summer Sessions 1990.
March 19-May 4	Touch Tone Telephone Registration for Summer Sessions I and II, 1990.
May 1	Tuesday. Deadline for applying for admission and providing supporting documents for Summer 1990.
May 29	Tuesday. New Student Orientation.

*For a more detailed calendar of semester events, see the schedule of classes for each semester.

- May 30** Wednesday. New Student Orientation. New and Returning Former Student Registration for Summer Sessions I and II, 1990.
- May 31** Thursday. Late registration for Continuing Students.
- June 4** Monday. Classes begin for Summer Session I. Continuing Late Registration.
- June 5** Tuesday. Last day of Late Registration. Last day to add a class.
- June 6** Wednesday. Last day to withdraw from courses in Summer Session I and receive an 80% refund of tuition and fees.
- June 7** Thursday. Last day in Summer Session I to: Drop or withdraw without a grade; drop and receive a refund; choose credit/no-credit grading option. Census date.
- June 11** Monday. Last day for students enrolled in Summer Session I to withdraw and receive a 50% refund of tuition and fees.
- June 15** Friday. Fall 1990 deadline for filing Petition for Reinstatement for students who have been academically dismissed a second or subsequent term.
- June 22** Friday. Last day for students enrolled in the first five-week term to drop an individual course. Last day to withdraw and receive an automatic "W".
- June 29** Friday. Last day for students enrolled in the first five-week term to withdraw from The University.
- July 1** Sunday. Last day for Summer 1990 degree candidates to apply for graduation.
- July 5-6** Thursday-Friday. Final examinations for courses in the first five-week term.
- July 6** Friday. Close of the first five-week term.
- July 9** Monday. Classes begin for courses in Summer Session II. Late Registration for Summer II.
- July 10** Tuesday. Last day to late register for Summer Session II. Last day to add a Summer II class.
- July 11** Wednesday. Last day to withdraw from courses in Summer Session II and receive an 80% refund of tuition and fees.
- July 12** Thursday. Last day in Summer Session II to: Drop or withdraw without a grade; drop and receive a refund; choose credit/no-credit grading option. Census Date.
- July 13** Friday. Last day for students enrolled in ten-week courses to drop an individual course. Last day to withdraw and receive an automatic "W".
- July 16** Monday. Last day for students enrolled in Summer Session II to withdraw and receive a 50% refund of tuition and fees.
- July 27** Friday. Last day for students enrolled in the second five-week term to drop an individual course. Last day to withdraw and receive an automatic "W".
- August 3** Friday. Last day for all students enrolled in Summer Session II and the ten-week term to withdraw from The University.

- August 9-10** Thursday-Friday. Final examinations for courses in the ten-week and second five-week terms.
- August 10** Friday. Close of Summer Session 1990.

*FALL SEMESTER, 1990

- May 21-July 13** Touch Tone Telephone Registration for Fall Semester, 1990.
- June 1** Friday. Deadline for Foreign Student admission applications for Fall Semester, 1990.
- July 1** Sunday. Deadline for applying for admission and providing supporting documents for Fall 1990.
- August 21** Tuesday. New Student Orientation.
- August 22** Wednesday. New Student Orientation and New and Returning Former Student Registration.
- August 23** Thursday. Late Registration.
- August 27** Monday. Classes begin. Continuing Late Registration.
- August 30** Thursday. Last day of Late Registration.
- August 31** Friday. Last day to withdraw and receive an 80% refund of tuition and fees. Last day to add a class.
- September 3** Monday. Labor Day Holiday.
- September 10** Monday. Last day to withdraw and receive a 70% refund of tuition and fees.
- September 12** Wednesday. Last day to: drop or withdraw without a grade; choose credit/no-credit grading option; drop a class and receive a refund. Census date.
- September 14** Friday. Last day to request excused absence for Religious Holy Day observance.
- September 17** Monday. Last day for students to withdraw and receive a 50% refund of tuition and fees.
- September 24** Monday. Last day to withdraw and receive a 25% refund of tuition and fees.
- October 1** Monday. Deadline for Fall 1990 degree candidates to apply for graduation.
- October 15** Monday. Spring 1991 deadline for filing Petition of Reinstatement for students who have been academically dismissed a second or subsequent time. Foreign Student admission application deadline for Spring Semester, 1991.
- October 26** Friday. Last day for students to drop an individual course or withdraw from The University and receive an automatic "W".
- November 22-24** Thursday-Saturday. Thanksgiving Holidays.
- December 3** Monday. Last day to withdraw from The University.
- December 10-15** Monday-Saturday. Final Examinations.
- December 15** Saturday. Semester closes.

*For a more detailed calendar of semester events, see the schedule of classes for each semester.

***SPRING SEMESTER, 1991**

October 15	Monday. Foreign Student admission application deadline for Spring Semester, 1991.
October 29- December 7	Touch Tone Telephone Registration for Spring Semester, 1990.
December 1	Saturday. Deadline for applying for admission and providing supporting documents for Spring 1991.
January 8	Tuesday. New Student Orientation.
January 9	Wednesday. New and Returning Former Student Registration.
January 10	Thursday. Late Registration.
January 14	Monday. Classes begin. Continuing Late Registration.
January 15	Tuesday. Last day of Late Registration.
January 18	Friday. Last day to withdraw and receive an 80% refund of tuition and fees. Last day to add a class.
January 25	Friday. Last day to withdraw and receive a 70% refund of tuition and fees.
January 29	Tuesday. Last day to: drop or withdraw without a grade; choose credit/no-credit grading option; drop a class and receive a refund. Census date.
February 1	Friday. Deadline for Spring 1991 degree candidates to apply for graduation. Last day for students to withdraw and receive a 50% refund of tuition and fees. Last day to request excused absence for Religious Holy Day observance.
February 8	Friday. Last day to withdraw and receive a 25% refund of tuition and fees.
March 1	Friday. Foreign student admission application deadline for Summer 1991.
March 15	Friday. Summer 1991 deadline for filing Petition for Reinstatement for students who have been dismissed a second or subsequent time. Last day for students to drop an individual course or withdraw and receive an automatic "W".
March 18-22	Monday-Saturday. Spring Break.
April 29	Monday. Last day for all students to withdraw from The University.
May 6-11	Monday-Saturday. Final Examinations.
May 11	Saturday. Semester closes.
May 12	Sunday. Commencement.

***SUMMER SESSION, 1991**

March 1	Friday. Foreign student admission application deadline for Summer Session 1991.
March 18-May 3	Touch Tone Telephone Registration for Summer Sessions I and II, 1991.
May 1	Wednesday. Deadline for applying for admission and providing supporting documents for Summer 1991.

*For a more detailed calendar of semester events, see the schedule of classes for each semester.

May 28	Tuesday. New Student Orientation.
May 29	Wednesday. New Student Orientation. New and Returning Former Student Registration for Summer Sessions I and II, 1991.
May 30	Thursday. Late Registration for Continuing Students.
June 3	Monday. Classes begin for Summer Session I. Continuing Late Registration.
June 4	Tuesday. Last day of Late Registration. Last day to add a class.
June 5	Wednesday. Last day to withdraw from courses in Summer Session I and receive an 80% refund of tuition and fees.
June 6	Thursday. Last day in Summer Session I to: Drop or withdraw without a grade; drop and receive a refund; choose credit/no-credit grading option. Census date.
June 10	Monday. Last day for students enrolled in Summer Session I to withdraw and receive a 50% refund of tuition and fees.
June 15	Saturday. Fall 1991 deadline for filing Petition for Reinstatement for students who have been academically dismissed a second or subsequent term.
June 21	Friday. Last day for students enrolled in the first five-week term to drop an individual course. Last day to withdraw and receive an automatic "W".
June 28	Friday. Last day for students enrolled in the first five-week term to withdraw from The University.
July 1	Monday. Last day for Summer 1991 degree candidates to apply for graduation.
July 2-3	Tuesday-Wednesday. Final examinations for courses in the first five-week term.
July 3	Wednesday. Close of the first five-week term.
July 8	Monday. Classes begin for courses in Summer Session II. Late Registration for Summer II.
July 9	Tuesday. Last day to late register for Summer Session II. Last day to add a Summer II class.
July 10	Wednesday. Last day to withdraw from courses in Summer Session II and receive an 80% refund of tuition and fees.
July 11	Thursday. Last day in Summer Session II to: Drop or withdraw without a grade; drop and receive a refund; choose credit/no-credit grading option. Census Date.
July 12	Friday. Last day for students enrolled in ten-week courses to drop an individual course. Last day to withdraw and receive an automatic "W".
July 15	Monday. Last day for students enrolled in Summer Session II to withdraw and receive a 50% refund of tuition and fees.
July 26	Friday. Last day for students enrolled in the second five-week term to drop an individual course. Last day to withdraw and receive an automatic "W".
August 2	Friday. Last day for all students enrolled in Summer Session II and the ten-week term to withdraw from The University.

August 8-9

Thursday-Friday. Final examinations for courses in the ten-week and second five-week terms.

August 9

Friday. Close of Summer Session 1991.

II. GENERAL INFORMATION

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Division of Music

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COLLEGE OF SCIENCES AND ENGINEERING

Division of Earth and Physical Sciences

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HISTORY

On June 5, 1969, the legislative act creating The University of Texas at San Antonio as a component institution of The University of Texas System was signed into law by the Governor. By this legislation directing that The University of Texas at San Antonio offer "courses leading to such customary degrees as are offered at leading American universities," the Legislature of the State of Texas established a new public institution of higher learning that would serve both undergraduate (lower and upper division) and graduate students. The legislation further stipulated that The University be "one of the first class."

In May 1970, the Board of Regents of The University of Texas System accepted a gift of approximately 600 acres of wooded land located sixteen miles northwest of the center of San Antonio to serve as the permanent campus for The University of Texas at San Antonio. Shortly thereafter administrative and planning offices were established in the former Maison Blanche building on the grounds of HemisFair Plaza.

By the end of 1970, a master conceptual plan for the permanent campus was approved by the Board of Regents, and by June 1971, final plans and specifications for the first seven permanent buildings of the campus were completed. After completion of the site improvement work, construction contracts were awarded in May 1972, calling for a completion date of May 1974, subsequently revised because of construction delays.

In January 1972, temporary classrooms and offices were acquired in northwest San Antonio in the Koger Executive Center at the intersection of Loop 410 and Babcock Road. Graduate students enrolled for the first time at the Koger site in June 1973. These facilities were occupied by The University until buildings on the new campus became available. Upper-division junior and senior students were accepted on the permanent campus in September 1975; and lower-division students were registered in June 1976.

In the Spring of 1972, the Board of Regents of The University of Texas System and the Texas Higher Education Coordinating Board, approved the academic organization and degree programs recommended for the new university. These degree programs, additional degree programs subsequently approved, as well as additional changes in UT San Antonio's organizational structure are described in the institutional catalogs.

The second phase of campus construction was initiated in Summer 1977. This phase consisted of a classroom and office building; an addition to the Arts Building, including a sculpture and ceramics studio building; ten outdoor championship tennis courts; and an outdoor multipurpose playing field with 400-meter running track.

The Student Representative Assembly had its constitution approved by the Board of Regents on October 1, 1976, and the first slate of officers was elected in November 1976.

The Alumni Association was chartered in Fall 1977.

A University Center Building opened in Summer 1986. The first residence hall on the UT San Antonio campus opened in Fall 1986.

MISSION

UT San Antonio, a comprehensive public metropolitan university, is committed to freedom of inquiry and the creation of an environment in which people can teach, discover, learn and enrich their individual and societal lives. Through its instructional, research and public service programs, UT San Antonio seeks to carry out its mission, to serve the needs of the multicultural population of San Antonio and the South Texas region, emphasizing programs that contribute to the technological, economic and cultural

development of the city and region. UT San Antonio also serves the broader geographical communities of the state, the nation and the world with selected programs reflecting specialized University strengths.

UT San Antonio, offering a wide range of academic programs leading to the bachelor's and master's degrees, and selected doctoral programs (upon approval), strives to guide students toward achieving knowledge and skills required to succeed in their chosen fields. In addition, The University provides the opportunity for all undergraduate students to develop those characteristics of a truly educated person through its general education requirements in social sciences, languages and culture, sciences and mathematics.

UT San Antonio provides access to its various degree programs to a broad constituency, and maintains rigorous academic standards in requirements for successful completion of its programs. Through flexible scheduling, varied course offerings and students support services, The University encourages attendance by both traditional and nontraditional students.

UT San Antonio emphasizes excellent teaching, research and creative activities, and scholarship. To this end, The University recruits and retains faculty who exemplify this balance. At the same time, it encourages faculty to engage in public service activities appropriate to their academic fields. UT San Antonio encourages and facilitates multidisciplinary instructional, research and public service efforts, where appropriate, through its administrative structure, degree programs and personnel policies.

Through its broad research efforts, UT San Antonio both creates new knowledge through its basic research programs and applies that knowledge to today's problems through its applied research activities. UT San Antonio seeks to facilitate the transfer of research findings into the work environment through continuing education and graduate level programs for maintaining and upgrading specialized skills of professionals employed in San Antonio and the South Texas region.

UT San Antonio seeks to enrich the cultural environment not only of The University but also of the community through its fine arts and humanities programming.

ORGANIZATION

The University of Texas at San Antonio is a component institution of The University of Texas System. Governance of The University is vested in the nine-member Board of Regents of The University of Texas System whose members are appointed biennially by the Governor, with the advice and consent of the Senate, for six-year staggered terms.

The Board of Regents delegates administrative authority to the Chancellor of The University of Texas System. The administrative authority of each component institution, such as The University of Texas at San Antonio, is in turn delegated to the President of that component.

The President at UT San Antonio is assisted by a staff including a Vice President for Academic Affairs, a Vice President for Administration, a Vice President for Business Affairs, and an Executive Director of the Institute of Texan Cultures. The Vice President for Academic Affairs provides the President with advice and counsel on academic matters and acts as a liaison between the President's Office and faculty committees concerned with academic matters. The Vice President for Academic Affairs chairs the Deans' Council. With approval of the Board of Regents of a non-traditional administrative structure for graduate education at UT San Antonio, the administrative functions that ordinarily are the responsibility of a Graduate Dean are carried out by the Vice President for Academic Affairs. As the administrative officer responsible for graduate education, this officer chairs the Council on Graduate Education. The Vice President

for Administration provides the President with advice and counsel on the general administrative services of The University and acts as liaison between the President's Office and all University standing committees. This officer is responsible for sponsored research and contracts, affirmative action, and the duties performed by the Director of Media Resources, the Director of Libraries and the Dean of Students. The Vice President for Business Affairs provides the President with advice and counsel on fiscal affairs and has direct responsibility for the business operation of The University including operation of the physical plant. This officer is responsible for budget preparation and analysis. The Executive Director of the Institute of Texan Cultures is responsible to the President for the planning, organization, operation, administration and supervision of The Institute, its programs and its operations.

Operational administration of the graduate and undergraduate programs of The University is the responsibility of the Deans of the four Colleges. The Deans report to the Vice President for Academic Affairs. They provide leadership in program, faculty, and staff development.

Instructional programs within the Colleges are organized by Divisions, headed by Division Directors, who have responsibility under the Dean for the operation of their Divisions. Division Directors also are expected to provide leadership in faculty and staff development and in academic program development.

Continuing Education activities of The University are coordinated within each of the four Colleges. Through each of the College Deans, the University develops, promotes, coordinates, evaluates, and provides financial and logistical support for conferences, institutes, short courses, workshops, seminars, and special training programs. While no permanently assigned faculty are employed, instructors for the various activities are selected from one or more of the four Colleges within The University of Texas at San Antonio or from institutions or organizations outside The University.

ACCREDITATION

The University of Texas at San Antonio is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools as a Level III, General postsecondary institution.

THE UTSA LIBRARY

The UTSA Library is housed in the John Peace Library Building, named in 1974 in honor of the late former Chairman of The University of Texas System Board of Regents. The library has developed rapidly in the 15 years since it initially opened its doors in temporary quarters to serve a few pioneering faculty and students. As of Fall 1988, the collections of the library include 379,140 cataloged volumes; 98,642 United States, Texas, and San Antonio government publications; and 381,788 volume equivalents held in microform. The library has approximately 3,716 subscriptions to periodicals and receives as a designated federal and state depository a wide variety of documents. All materials have been selected to support the teaching and research missions of The University.

The UTSA special collections and rare books focus on Western Americana and on Texana. Notable among the special collections are the John Peace Collection of books and documents in the period of the Texas Republic and the Kathryn Stoner O'Connor Collection of early Texas and Mexican materials on permanent deposit in the Special Collections Department from the Sons of the Republic of Texas.

The public services staff includes professional librarians with subject expertise who assist students and faculty in using the library's collections. On-line catalog and on-line or on-disk computer searching are available as is a full range of interlibrary loan ser-

vices. Circulation, acquisitions, and cataloging procedures are highly automated. The library is a member of OCLC, a national cataloging service. It is also a member of the Council on Research and Academic Libraries (CORAL), a library network which has as its goal the developing and strengthening of information resources and services in the greater San Antonio area.

The library building is designed to offer full services and convenience to students and faculty. The majority of books and periodicals are on open shelves for browsing and ease of access. In addition to the traditional library facilities, the UTSA Library also has full audio-visual capability, music listening facilities, and a curriculum materials center. Carrels, group study rooms, lounges, and faculty studies are conveniently located throughout the building to provide ideal study conditions. Copiers for paper and microform materials are available to library users.¹

INSTITUTE FOR THE ARTS AND HUMANITIES

The Institute for the Arts and Humanities is located in the College of Fine Arts and Humanities. The Institute activities encompass the fine arts (visual and performing arts) and humanities (art history, architectural history, art criticism, literature, and foreign languages). The goals of the Institute include providing assistance to faculty, students and other persons interested in pursuing research and further studies, and making available general information on the arts of Western Europe and the Americas.

The Institute fosters professional research in the fine arts and humanities. It provides opportunities for faculty and students in the College to continue their research and to serve the community of scholars within and outside The University.

RESEARCH CENTER FOR THE VISUAL ARTS

The activities of the Research Center for the Visual Arts encompass the visual arts, art and architectural history, and art criticism. The Center will have a primary focus on historical disciplines with special reference to the study of Iberian and Interamerican arts.

INSTITUTE FOR STUDIES IN BUSINESS

The Institute for Studies in Business is the research center of the College of Business. The major objective of the Institute is to offer the opportunity for students and faculty of The University to have an adequate environment for problem solving and community-related research. While the Institute is an integral part of the College of Business, it interacts with the faculty of the other Colleges to provide an interdisciplinary approach to research and business education.

The focus of activity at the Institute is on application of theories and research techniques to produce useful information for public and private decision making. Specialized data files are maintained on a continuing basis, while a research library and information systems guide interested users to sources of information. The knowledge and experience of The University's faculty are utilized to solve specific problems in the broad categories of management, finance, administration, planning, economic feasibility, production, economic impact, anti-trust laws and procedures, international trade, environmental protection, and human resource utilization.

INSTITUTE FOR RESEARCH IN SCIENCES AND ENGINEERING

The Institute for Research in Sciences and Engineering (IRSE) addresses the research functions of the College of Sciences and Engineering. The major goals of IRSE are to

¹Additional information on the UTSA Library and on its borrowing regulations may be obtained in the library.

offer opportunities for expanded research in the science and engineering fields for faculty and graduate students, to nurture interdisciplinary, mission-oriented team research projects, and to provide an educational opportunity whereby individual skills can be developed to fill employer's needs for scientific, engineering and technical fields. Although IRSE is a part of the College of Sciences and Engineering, it interacts with the faculty of the other Colleges and with the local research community through the Southwest Research Consortium.

IRSE serves as a focal point for science and engineering activities at The University by providing contract and grant management and by furnishing services and research support for faculty and students. Exceptional students have an opportunity to gain valuable work experience through the various research and educational programs supported by IRSE.

IRSE seeks to support the individual involved in research, as well as to nourish team research for projects requiring the strength of individuals drawn from many disciplines. Individual research projects are active in all areas of the College, ranging from the life sciences, chemistry, computer science and systems design, physics, civil engineering, electrical engineering, and mechanical engineering to geology.

CENTER FOR HUMAN ORIENTED SCIENCES AND ENGINEERING

Because of the strength of the team effort addressing the application of the sciences and engineering to problems relating to human characteristics and requirements involved in complex systems including both physical and social aspects of the environment, the Center for Human Oriented Sciences and Engineering (CHOSE) has been formed within IRSE. CHOSE emphasizes studies in applied mathematics and statistics, information and computer science, cognitive science including artificial intelligence and computer-aided instruction, and human physiology and performance.

Team efforts have been conducted in the past in diverse areas involving pharmacological chemistry, health related issues, and energy and environmental studies. When the effort is of appropriate magnitude, centers such as CHOSE will be formed as a mechanism for enhancing the research effort.

CENTER FOR GROUND-WATER RESEARCH AND TECHNOLOGY

The Center for Ground-Water Research and Technology (in the College of Sciences and Engineering) was established in January 1987 as a research facility which is structured and managed to address research activities in the general area of the hydrologic sciences and specifically in the various scientific disciplines involved in ground-water studies. The Center for Ground-Water Research and Technology at UTSA has principally directed its research efforts in the hydrogeology of carbonate aquifer systems with special emphasis on the Cow Creek, Glen Rose, and Edwards aquifers in south-central Texas. Current research areas include: stable isotope geochemistry, seismic geophysical studies, mathematical modeling of aquifer flow systems, well hydraulics, structural geologic controls on ground-water movement, contaminant transport and attenuation studies, and porosity geometry determinations.

INSTITUTE FOR RESEARCH IN SOCIAL AND BEHAVIORAL SCIENCES

The Institute for Research in Social and Behavioral Sciences coordinates the activities of two Centers and two Offices located in the College of Social and Behavioral Sciences. The Centers and Offices are designed to promote faculty and student research and to assist local agencies and citizens who need professional services from areas represented in the College.

CENTER FOR ARCHAEOLOGICAL RESEARCH

The Center for Archaeological Research (in the College of Social and Behavioral Sciences) was established in September, 1974. Among its objectives are: (1) to provide the opportunity for students to train in archaeology; (2) to promote archaeological research in the South and South Central Texas region; (3) to carry out archaeological surveys and assignments for federal and state agencies as required by legislation and executive orders; (4) to aid local agencies and citizens who need the services of trained archaeologists.

The Center's staff includes a number of graduate and undergraduate students, who, along with other Center personnel, have conducted archaeological investigations in various parts of Texas, particularly in the South, Southwest, and Central sections of the state. Other research by the Center has included the study of the ancient Maya at the sites of Colha, Belize, and Rio Azul, Guatemala. Results of Center investigations are published in nearly 200 volumes in 10 publications series: *Archaeological Survey Reports; Regional Studies; Special Reports; Guidebooks in Archaeology; Choke Canyon Series; Colha Project Interim Reports, Colha Project, Belize; Working Papers; Papers of the Colha Project; Rio Azul Reports, Rio Azul Project, Guatemala; Archaeology and History of the San Juan Bautista Mission Area, Coahuila and Texas.*

The Center has administered more than 300 contracts and grants to date, among which was a two-year study of the archaeology and ethnohistory of the Spanish mission complex at Guerrero, Mexico, a multi-year study of the prehistory and history of the Choke Canyon Reservoir area in southern Texas, five seasons of excavation at the Maya site of Colha in Belize, Central America, and studies of the Rio Azul site in Guatemala. Several projects have also been carried out in Louisiana and New Mexico. In addition, the Center has helped to organize and support regional archaeological surveys and excavations and has participated in local, state, and international archaeological conferences.

In 1985, the Center launched its "Friends of Archaeology" program of public participation in archaeological research. Through the "Friends" program, the Center is able to provide seed grants for faculty and students, and research assistant stipends for graduate and undergraduate anthropology majors, as well as the sponsorship of special lectures.

CENTER FOR LEARNING AND DEVELOPMENT RESEARCH IN EDUCATION

The Center for Learning and Development Research in Education, located in the College of Social and Behavioral Sciences, is designed to stimulate basic and applied research in learning and development, particularly as it applies to the educational process. Faculty and students from this College, as well as faculty and students from other Colleges of the University, are encouraged to study problems appropriate to this area. The objectives of the Center include: promotion of research in learning and development in education; development of cooperative faculty-student research; cooperation with school districts, social service agencies, and community agencies on problems of mutual interest; and solicitation of funds for appropriate activities.

The Center's role involves identifying and coordinating faculty, student, and community interests, needs, and resources. Faculty members from the College and The University, with interest and training in learning and development in education, participate in projects related to the Center's activity.

OFFICE OF PROFESSIONAL DEVELOPMENT IN EDUCATION

The Office of Professional Development in Education, located in the College of Social and Behavioral Sciences, is designed to promote professional development activities

for educators. The development of advanced academic training programs (AAT), the coordination of UTSA faculty in staffing advanced academic training programs, the presentation of professional training programs for educators as identified by Chapter 75 of the Texas Education Code and the evaluation of advanced academic training programs are at the core of its activities. The office seeks to work with schools to develop advanced academic training programs that will fit the needs of both the professional educator and the local community.

Three delivery systems are available to meet these objectives: (1) graduate or undergraduate coursework for university credit in subject matter or professional education areas; (2) advanced academic training in subject matter areas; and (3) advanced academic training in areas such as classroom management training, pedagogy, and strategies and techniques for teaching.

Each of these programs can be offered on UTSA's campus, at HemisFair Plaza or at selected off-campus locales. Credit for graduate and undergraduate coursework is accumulated via standard academic procedures including conformity to graduate, special graduate or undergraduate admission requirements. All advanced academic training programs conform to Texas legislative guidelines whereby 15 hours of AAT is equivalent to 1 hour of graduate coursework.

OFFICE OF RESEARCH ON TEACHING PERFORMANCE

The Office of Research on Teaching Performance (in the College of Social and Behavioral Sciences) was established in response to the 1985 Texas educational reform legislation which mandates the performance appraisal of teachers. The Office has three main purposes: (1) to collaborate with educating institutions for the explication of effective teaching processes to promote students' learning, (2) to study teaching performance in varied instructional settings, and (3) to interpret and disseminate research findings on the processes of teaching and teacher evaluation to the profession and the public.

The Office promotes collaboration among researchers, teachers, and administrators in school settings and in other educating institutions for the design, support, and conduct of research into variables of teaching performance and teaching effectiveness.

A major purpose of the Office is to interpret research on teaching for the profession and the public. The Office designs and develops workshops, conferences, and media productions among other delivery systems, to broadly disseminate the meanings of research on teaching and to promote understanding of the complexities and dimensions of teaching performance.

THE UNIVERSITY BOOKSTORE

The University Bookstore, owned and operated by UT San Antonio, is located on the first level of the Science Building. The Bookstore attempts to maintain a complete inventory of all required and recommended books for UT San Antonio courses. In addition, the University Bookstore carries a complete line of general school supplies, writing instruments, art materials, soft goods, decals, greeting cards, and a variety of gift items.

THE UNIVERSITY FOOD SERVICE

Two cafeterias, one on the first level of the John Peace Library Building and the other located in the University Center, provide food and beverage service to the University community. Owned and operated by UT San Antonio, the cafeterias provide breakfast, lunch, dinner and snacks. Daily specials and salad bars are available at these facilities.

The Subway Sandwich Shop, located on the lower level of the Humanities-Business building, features many kinds of hot and cold sandwiches for a quick lunch or coffee break. The Roadrunner Roost in the University Center serves beverages and snacks in a relaxed "Pub" environment. The University Food Service also provides catering for large and small groups. A declining balance cash card system, the Roadrunner Express Card, is available to all students, faculty and staff. Information on this program may be obtained by contacting the Food Service Office in the John Peace Library Building.

COMPUTING RESOURCES

Computing services at UT San Antonio are provided by three host systems located in a central computing facility in the John Peace Library Building. Two of the hosts, an IBM 4300 series system and an DEC VAX system, support academic activity with both on-line and batch capabilities. Interactive terminals are available to students in "Terminal Laboratories" located in several buildings. Dial-in support is also provided for access to these academic systems. Each of the Colleges has established "Microcomputer Laboratories" which provide its students access to this leading edge technology applied to problems specific to its curriculum.

Administrative processing is provided by the third host, an IBM 4300 series system, which supports the Integrated Student Information System as well as an automated library system and the University's financial systems.

OFFICE OF MEDIA RESOURCES

The Office of Media Resources is a university-wide media unit for UTSA located with offices, production studios, and the audiovisual center in the Multidisciplinary Studies Building. A-V sub-centers are located in the Humanities-Business Building and the Science Building.

The Office of Media Resources offers a variety of services in support of academic activities. Some of these services include film selection and ordering assistance; graphic art production including typesetting, laminating, overhead transparency design and original artwork; photography in black and white and color; scheduling and distribution of audio-visual equipment for classroom and research use; television and audio production; public address sound support; equipment maintenance; and technical-consultative services for instructional and professional development.

THE UNIVERSITY CENTER BUILDING

The University Center Building, located on the West Paseo between the Humanities-Business Building and the Physical Education Building, opened in Summer 1986. The two-story, 42,000-square foot facility, houses a lounge, cafeteria, recreation room, television rooms, and cafe. Additionally, a large multipurpose room, meeting rooms, and print shop are available in the Center. A student activity complex on the second floor provides work space for registered student organizations, student government offices, the University Center Program Council office, and the Student Activities Office. The Ticketmaster outlet is located at the Information Desk in the University Center.

VETERANS' ASSISTANCE

Financial assistance is available to veterans, eligible dependents of veterans, and personnel on active service in the Armed Forces. The Office of Veterans' Affairs, located in The Office of Admissions and Registrar, assists those eligible for this program by pro-

viding all the necessary forms and current information about the benefits provided under the law.

It is the responsibility of every student who receives veterans' assistance to be informed of the academic standards of progress that apply to all eligible VA recipients. These standards comply with Veterans Administration regulations and are monitored by the Texas Education Agency.

INSTITUTE OF TEXAN CULTURES

The Institute was established as the official State of Texas exhibit at the 1968 San Antonio world's fair (HemisFair) and was transferred to the U. T. System Board of Regents by the 61st Legislature in 1969. On February 14, 1986, the regents approved an enhanced educational mission for the University of Texas Institute of Texan Cultures along with an administrative affiliation of the Institute with The University of Texas at San Antonio.

Since its inception, the Institute has grown into a learning and communication center for the interpretation of Texas history and folk culture. Displays of art and artifacts become a teaching laboratory as professionally trained staff members and volunteers use the exhibits as a setting for "living history". The annual Texas Folklife Festival, held on the Institute's grounds for four days each August, attracts more than 5,000 participants and 100,000 visitors every year.

III. TUITION, FEES, CHARGES, PENALTIES AND DEPOSITS

PAYMENT AND REFUND POLICIES

All policies regarding the payment or refunding of tuition, fees, and charges, are approved by the Board of Regents of The University of Texas System and comply with applicable state statutes. If a person desires clarification of any matter relating to payment or refund of such charges, he or she should contact the office or administrative unit from which the charge or refund originated.

PAYMENT

Students are entitled to enter class or laboratory only after payment of their tuition and fees has been arranged using one of the following alternatives:¹

- a) Full payment of tuition and fees in advance of the beginning of the semester.
- b) One-half payment of tuition and fees in advance of the beginning of the semester and one-half payment prior to the start of the eighth class week.
- c) One-fourth payment of tuition and fees in advance of the beginning of the semester and separate one-fourth payments prior to the fourth, eighth, and twelfth class weeks.

A student may choose option (b) or (c) only during the fall and spring semesters. A service charge of \$16.00 will be added to the student's bill if alternative (b) or (c) is chosen.

If the student chooses to use the installment options, a promissory note must be completed and be on file in the Bursar's office before the registration process can be considered complete.

No change in the payment plan chosen by the student at Registration will be allowed during the semester.

A student who fails to provide full payment of tuition and fees, including late fees assessed, to The University when the payments are due is subject to one or more of the following actions at The University's option:

- a) Bar against readmission or enrollment for future semesters at this institution.
- b) Withholding of grades, degree and official transcript.
- c) All penalties and actions authorized by law.

All Financial Aid will be applied to total tuition and fees before calculation of payment plan. Partial installment payments will not be accepted. However, prepayment in full of an installment or of total installments will be accepted at any time after registration.

Refunds from the Add/Drop process will be prorated to remaining installments. Additional fees incurred from the Add/Drop process will be added to the balance due from Registration and the installment payments will be recalculated according to the installment plan chosen at Registration.

A late fee of \$10.00 will be added to the student's bill if an installment payment is not paid by the due date. A student who fails to make full payment prior to the end of the semester will not receive credit for the work done that semester and will not be allowed to register for further semesters until the delinquent amount is paid.

Payment may be made by credit card or by personal check for the exact amount due, provided the bank transit number is encoded thereon in compliance with revised Federal Reserve Bank regulations. Checks for larger amounts, if the difference is to be paid in cash to the students, cannot be accepted. In paying by check, students should exercise care. A bad check, whether given by mistake or otherwise, unless it is the

¹Tuition and fees are subject to change by legislative action. Changes in tuition or fees will be effective upon date of enactment and will be reflected in fees and tuition charged. The availability of installment payment options is also subject to change by legislative action.

admitted error of the bank concerned, is likely to delay actual payment and thus result in a penalty as outlined in the section on Returned Check Fee. If a check is returned, which has been used for payment of an advanced registration, and this check is not cleared before the start of the semester, a late registration fee of \$15.00 will be charged to the student.

Personal checks may be cashed in the University Bookstore for an amount up to \$5.00. It is recommended that students establish checking accounts in local San Antonio banks before enrolling in order that they can easily cash checks in the city. Many local merchants will not cash out-of-town checks.

TUITION

Pursuant to Subchapter B, Chapter 54, Texas Education Code, each student who registers at UT San Antonio is required to pay tuition² according to the number of semester credit hours for which registration is completed and according to his/her residence classification, as set forth in the tables on the following pages:

TUITION EACH SEMESTER

Number of Hours Taken	Residents of Texas	Nonresidents	
	Fiscal Years 89-90 & 90-91	Fiscal Year 89-90 U.S. Citizens	Foreign Students
1	100.00	122.00	122.00
2	100.00	244.00	244.00
3	100.00	366.00	366.00
4	100.00	488.00	488.00
5	100.00	610.00	610.00
6	108.00	732.00	732.00
7	126.00	854.00	854.00
8	144.00	976.00	976.00
9	162.00	1,098.00	1,098.00
10	180.00	1,220.00	1,220.00
11	198.00	1,342.00	1,342.00
12	216.00	1,464.00	1,464.00
13	234.00	1,586.00	1,586.00
14	252.00	1,708.00	1,708.00
15	270.00	1,830.00	1,830.00
16	288.00	1,952.00	1,952.00
17	306.00	2,074.00	2,074.00
18	324.00	2,196.00	2,196.00
19	342.00	2,318.00	2,318.00
20	360.00	2,440.00	2,440.00
21	378.00	2,562.00	2,562.00
Each Addi- tional Hour	18.00	122.00	122.00

²See Exemption from Tuition and Fees in this section of the catalog.

TUITION SUMMER SESSION

Number of Hours Taken	Residents of Texas		Nonresidents Fiscal Year 89-90	
	Each Summer Term Fiscal Years	Entire Summer Session Fiscal Years	U.S. Citizens	Foreign Students
	89-90 & 90-91	89-90 & 90-91		
1	50.00	100.00	122.00	122.00
2	50.00	100.00	244.00	244.00
3	54.00	100.00	366.00	366.00
4	72.00	100.00	488.00	488.00
5	90.00	100.00	610.00	610.00
6	108.00	108.00	732.00	732.00
7	126.00	126.00	854.00	854.00
8	144.00	144.00	976.00	976.00
9	162.00	162.00	1,098.00	1,098.00
10	180.00	180.00	1,220.00	1,220.00
11	198.00	198.00	1,342.00	1,342.00
12	216.00	216.00	1,464.00	1,464.00
13	234.00	234.00	1,586.00	1,586.00
14	252.00	252.00	1,708.00	1,708.00
15	270.00	270.00	1,830.00	1,830.00
Each Addi- tional Hour	18.00	18.00	122.00	122.00

CONCURRENT TUITION

Students who register at more than one public institution of higher education in Texas concurrently **may** receive the benefits of a lower tuition rate. If, at the time of registration, a student can produce evidence of having already paid his or her tuition at another public institution of higher education in Texas, the student should present such evidence at the Fee Assessment station during registration.

RESIDENCE REGULATIONS

A student entering or re-entering The University of Texas at San Antonio may be required to file a residence questionnaire. The student's status as a resident or nonresident will be made in accordance with the Texas Education Code.³ If the applicant has any doubt about his/her status, he/she should consult the Director of Admissions and Registrar prior to registration. There can be no change in residence classification without the express authorization of the Registrar.

GENERAL FEE

The General Fee is a compulsory fee authorized by statute for the use and availability of University buildings and facilities as set forth in the following table.

STUDENT SERVICES FEE

A compulsory Student Services Fee is charged to all students enrolled at The Institution as set forth in the following table. This fee provides services and activities which

³For residence regulations, consult the Office of Admissions and Registrar.

are separate and apart from the regularly scheduled academic functions of The University and directly involve or benefit students. These services and activities include recreational activities, health services, intramural and intercollegiate athletics, artists and lecture series, cultural entertainment series, student government, and any other student activities and services specifically authorized and approved by the Board of Regents. Please see the following table of General and Student Services Fees.

GENERAL FEE AND STUDENT SERVICES FEE TABLE

Each student who registers at UT San Antonio is required to pay general fees and service fees⁴ according to the number of semester credit hours for which registration is completed, as set forth in the table below:

SEMESTER HOURS	GENERAL FEE	STUDENT SERVICES FEE
1	6.00	9.00
2	12.00	18.00
3	18.00	27.00
4	24.00	36.00
5	30.00	45.00
6	36.00	54.00
7	42.00	63.00
8	48.00	72.00
9	54.00	81.00
10	60.00	90.00
11	66.00	90.00
12	72.00	90.00
13	78.00	90.00
14	84.00	90.00
15	90.00	90.00
Each Addi- tional Hour	6.00	-0-

UNIVERSITY CENTER FEE

University Center Fees are as follows:

\$15.00 per student each regular session; \$7.50 each summer session.

DEGREE APPLICATION FEE

A \$12.00 application fee is required of candidates for a degree. Application for a degree must be made at the Registrar's Office and the fee paid according to the specific dates listed under Application for the Degree. This fee is not refundable and must be paid each time an application for a degree is filed. Cap and gown rental is not provided as part of the degree application fee.

LATE REGISTRATION FEE

A late registration fee of \$5.00 is charged for the first day of the late registration, and an additional \$2.50 per day is assessed thereafter. The maximum late registration fee for any one term is \$15.00. This fee may be waived only in extenuating circumstances by the President or his delegate. The late registration fee is not refundable.

⁴See Exemption from Tuition and Fees in this section of the catalog.

LIBRARY FINES FOR OVERDUE MATERIALS AND FOR LOST OR DAMAGED ITEMS

Fines are charged for overdue library materials and for library items that are lost or damaged.⁵

CREDIT BY EXAMINATION FEE

A fee of \$15.00 per examination is required of students who challenge UT San Antonio undergraduate courses. Procedures for challenging undergraduate courses by examination are set forth under General Academic Regulations in this catalog.

RETURNED CHECK FEE

A charge of \$10.00 is assessed for each returned check to offset the cost of handling dishonored checks. The University will not accept a check from a student who wittingly or unwittingly has previously given two bad checks.

STUDENT PHOTO IDENTIFICATION CARD CHARGES

A one-time charge of \$5.00 is assessed for the issuance of a student photo identification card. A charge of \$10.00 is assessed for the issuance of a replacement photo identification card. This charge must be paid at the time the application for the replacement is made.

TRANSCRIPT FEE

A charge of \$4.00 is made for each UT San Antonio transcript to be processed and mailed within 48 hours. A charge of \$6.00 is required if the transcript is to be provided within 1 hour. This fee must be paid before a transcript will be issued.

INSTRUMENT USERS FEE

In certain biology courses, an instrument users fee of \$10.00 per course may be charged. When this fee is charged, the schedule of classes indicates the associated fee.

LABORATORY FEE

In certain courses a laboratory fee, not to exceed the actual cost of materials and supplies and not less than \$2.00 nor more than \$30.00, may be charged. When a laboratory fee is charged, the schedule of classes indicates the associated fee.

COMPUTER USE FEE

In certain courses a computer use fee of \$5.00 per hour may be charged. The minimum fee is \$15.00 and the maximum fee is \$40.00 per semester. When a computer use fee is charged, the schedule of classes indicates the associated fee.

SUPPLEMENTARY AND SPECIAL FEES

Certain art, music and other courses may require supplementary or special fees. When such fees are charged, the schedule of classes indicates the associated fee.

⁵Borrowing and fine regulations of the UTSA Library are available in the Library.

AUDITING FEE

All auditors of courses must submit an approved Request for Audit Form to the Registrar. Students registered at UT San Antonio may, with the approval of the instructor and Director of the Division in which the course is offered, audit courses by paying an auditing fee of \$5.00 per course. The audit fee is not refundable.

Upon approval of a Request for Audit Form, a non-student auditor must pay an auditing fee of \$25.00 per course. The fee is not refundable. Non-students over 65 are permitted to audit without paying a fee, provided space is available and a Request for Audit Form is approved. Non-student auditors who wish library privileges may receive them by filling out a Friend of the UTSA Library application at the Circulation Desk in the UTSA Library (John Peace Library Building, second floor) and paying a non-refundable donation. Donations are \$15.00 September through August or \$7.50 for the months of June through August only. There are limits on the services offered to Friends of the UTSA Library card holders; further details are available from the Circulation Desk.

Permission to audit may be obtained and fees paid only during the late registration period.

All auditors of courses must register their vehicles and obtain parking permits from the University Police Traffic Office.

PARKING FEES

All vehicles parked on the campus must be in compliance with the *UTSA Parking and Traffic Regulations*. Copies of these regulations are available during registration, and in the University Police office.

Parking fees for students are as follows:

Class G &	\$22.00 General & Dormitory parking permit, if purchased during the fall semester.
*Class D	\$10.00 General & Dormitory parking permit, if purchased during the spring semester. \$5.00 General & Dormitory parking permit, if purchased during the summer session.
Class C	\$12.00 Motorcycle, motor scooter, motorbike parking permit, if purchased during the fall semester. \$5.00 Motorcycle, motor scooter, motorbike parking permit, if purchased during the spring semester. \$3.00 Motorcycle, motor scooter, motorbike parking permit, if purchased during the summer session.
Class W	\$3.00 Bicycle parking permit, if purchased any time during the academic year.
Class M	\$15.00 Mini-car parking permit if purchased during the fall semester \$7.00 Mini-car parking permit if purchased during the spring semester \$5.00 Mini-car parking permit if purchased during the summer session
Class S	Carpool fees vary by semester and by number of primary vehicles registered in carpool.

Parking permits are available for handicapped and disabled persons in accordance with applicable statutory law and U.T. San Antonio Parking and Traffic Regulations.

Refunds for unused portions of parking permits must be requested on the "Refund Request Form" available in the University Police Traffic Office. Refunds will be made in

*Dormitory permits are valid in Dormitory lot and any unrestricted lined parking space in other parking lots.

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accordance with the current UTSA Parking & Traffic Regulations, Article II, Subdivision II, Section 7.

FIELD TRIP FEE

A supplementary fee is assessed students in certain courses to pay for the expenses of field trips.

PRINT MAKING FEE

A fee is assessed students enrolled in print making courses in the Art and Design curriculum to defray the cost of supplies and materials.

PHYSICAL EDUCATION FEES

Physical Education Activity Fee. A fee of \$8.00 for a semester or summer term is required of every student registering for a physical education course or activity. Lockers, towels, and locks are provided.

Equipment and Lane Fee. A fee of \$60 for a semester or summer term is required of every student registering for a physical education *bowling* course.

UTSA FACULTY AND STAFF GYMNASIUM AND FACILITY USE FEE

Faculty and staff gymnasium and facility use fees are required. Faculty and staff (and their guests) may use the Convocation Center and Gymnasium and other recreational facilities at specified hours only. Fees are charged according to the schedule below. Lockers and locks are provided. In order for a spouse or a child to use the facilities, the student, faculty, or staff member must first pay his/her use fee. Children must be accompanied by a parent or guardian.

CATEGORY	ANNUAL FEE
A. UTSA Personnel	
1) Faculty-staff member	\$12.00
2) Faculty-staff spouse	6.00
3) Faculty-staff child	3.00 (maximum of \$25.00 per family)
4) Student spouse	3.00
5) Student child	1.00
B. Guest fee	\$ 1.00
Guest of UT San Antonio student, faculty member, or staff member	

These fees are non-refundable.

TENNIS CENTER FEE

Full-time student dependents, UTSA full-time faculty and staff and their dependents, and the general public may use the Tennis Center at specified hours. Fees are charged according to the schedule below. By paying the Tennis Center fee, a person is entitled to use any of the other athletic facilities.

Student Dependents. The spouse or child of a full-time student may use the Tennis Center and all other athletic facilities. Fees are charged according to the schedule below. A full-time undergraduate student is one enrolled for at least 12 semester hours in the fall or spring semester or for 6 or more hours during a summer term.

CATEGORY	ANNUAL FEE
1. Full-time student spouse	\$6.00 per semester or entire summer
2. Full-time student child	6.00 per semester or entire summer

Lockers and locks are provided. In order for a spouse or child to use the Tennis Center, the faculty or staff member must first pay his/her use fee. Children must be accompanied by a parent or guardian.

UTSA Personnel and Dependents. Full-time faculty and staff desiring to use the Tennis Center are charged according to the schedule below:

CATEGORY	ANNUAL FEE
1. Faculty-staff member	\$12.00
2. Faculty-staff spouse	12.00
3. Faculty-staff child	12.00 (maximum of \$40.00 per family)

General Public and Guests. The general public and guests of UTSA students and personnel may use the Tennis Center at certain hours for \$1.50 per person for a 1½ hour reservation. Part-time faculty and staff, and dependents of part-time faculty, staff and students are considered in the category of general public. The University of Texas Health Science Center at San Antonio faculty/staff/students are in this category. The University reserves the right to give the general public lowest priority in use of the Tennis Center. General public and guest fees are payable at the Tennis Center office.

DUPLICATE FEE RECEIPT

A service charge of \$2.00 is assessed for the issuance of a duplicate fee receipt. This charge must be paid at the time the application for a duplicate fee receipt is made.

DUPLICATE CLASS SCHEDULE

A service charge of \$2.00 is assessed for the issuance of a duplicate class schedule. This charge must be paid at the time the application for a duplicate class schedule is made.

GENERAL PROPERTY DEPOSIT

Every student must make a general property deposit of \$10.00 at the time of initial registration to protect The University from losses, such as property loss, damage, or breakage, violation of rules in any University library or laboratory, failure to return keys furnished by The University, or damage to or loss of any other University property. Charges are billed directly to the student or are collected by the department upon reissue of supplies or property. Failure to pay the charges promptly results in denial of the student's readmission or reenrollment, and in refusal to issue the student's transcript by The University.

The deposit is refunded upon request, less outstanding charges, only when the student officially withdraws from school or graduates. A general property deposit which remains without call for refund for a period of four years from the date of last attendance at The University shall be forfeited, and the deposit shall become operative to the permanent use and purpose of student scholarships.

CAREER PLANNING AND PLACEMENT REGISTRATION FEE

UT San Antonio students and alumni interested in establishing a credential file for an employment search or for graduate or professional school applications, are invited to use the services of the Career Planning and Placement Center. There is no registration

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fee for students currently attending UT San Antonio. There is a \$3.00 fee for alumni who are interested in using the Center's services after leaving The University. Active registrants may make use of the full range of services offered by the Center, e.g., on-campus interviewing, part-time job service, resume and interview seminars, vacancy listings, direct job referral, and duplication and mailing of credential file materials to prospective employers.

TEACHER PLACEMENT SERVICE FEE

Presently enrolled students of The University of Texas at San Antonio may register for teacher placement services with the Office of Teacher Certification and Placement on a no-fee basis. Nonstudents and alumni will be charged an annual \$5.00 registration fee. The registrant receives the preparation, duplication and maintenance of three sets of credentials. A handling fee of \$5.00 plus copying charges will be assessed for each additional set requested.

Pre-TASP Test Fee

A fee of \$3.00 will be charged students to cover cost of testing for the Pre-TASP Placement test. The Pre-TASP fee applies to students who have not taken the TASP test prior to enrollment at The University of Texas at San Antonio.

PROFESSIONAL LIABILITY (MALPRACTICE) INSURANCE

Prior to official registration for courses that place them in a clinical situation, allied health students are required under the Rules and Regulations of The University of Texas System Board of Regents to show evidence of professional liability (malpractice) insurance coverage. The Director of the Division of Life Sciences may be consulted relative to obtaining such insurance.

EXEMPTION FROM TUITION AND FEES

The Statutes of the State of Texas prescribe certain cases in which students can be exempted from tuition and/or certain fees. The various types of exemptions are described below; however, in each case it is the student's responsibility to initiate the action of applying for an exemption through the Registrar's Office and providing satisfactory evidence that all conditions required for the exemption have been met. Until such time as the exemption is granted, a student is required to pay all tuition and fees from his or her own funds. Students who might be eligible for an exemption should apply for the exemption at the Registrar's Office at least one month prior to registration for the term in which they plan to utilize the exemption.

DESCRIPTION	ELIGIBILITY	FEES EXEMPTED
Accredited School Scholarship	Highest ranking graduate of an accredited Texas high school	Tuition during first two semesters (long session) following graduation
Texas Ex-Servicemen	(1) Resided in Texas for 12 months prior to registration (2) A bona fide legal resident of Texas at time entered service (3) Served in armed forces in World War I, World War II, Korean Conflict, or the Cold War	Tuition Laboratory fees Supplementary fees General fee

	(4) Honorably discharged (5) Not eligible for Federal Educational benefits	
Children of Disabled Texas Firemen and Peace Officers	For children under 21 years of age of disabled full-paid or volunteer firemen, full-paid municipal, county, or state peace officers, or custodians of the Department of Corrections, or game wardens	Tuition Required fees ⁶
Blind and Deaf Students	A blind disabled person, or a person whose sense of hearing is nonfunctional	Tuition Required fees ⁷ General Property Deposit
Children of Texas Veterans	For children of members of the armed forces who were killed in action in World War II, Korean Conflict, or the Cold War, and to orphans of members of the Texas National Guard killed since January 1, 1946, while on active duty. Children cannot be eligible for Federal Educational benefits	Tuition Laboratory fees Supplementary fees General fee
Good Neighbor Scholarship	(1) Native-born students from other nations of the American hemisphere — limited to 235 students each year (2) Furnish certified evidence of native-born citizenship and scholastic qualifications	Tuition
Firemen Enrolled in Fire Science Courses	Enrolled in course offered as part of fire science curriculum	Tuition Laboratory fees Supplementary fees
Children of Prisoners of War or Persons Missing in Action	Dependent person under 25 years of age who receives majority of support from parent. Parent classified by Department of Defense as a Prisoner of War or Missing in Action at the time of registration	Tuition Required fees ⁸

NOTE: Required fees include laboratory fees, supplementary fees, the general fee, student services fee, and the University Center fee.

REFUND POLICY AND ADJUSTMENT OF FEES FOR STUDENTS WITHDRAWING, ADDING, OR DROPPING COURSES

A student who officially withdraws from The University prior to the first class day will be refunded 100% of collected tuition and returnable fees.

^{6,7,8} Required fees include laboratory fees, supplementary fees, the general fee, student services fee, and the University Center fee.

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In a Fall or Spring semester, a student withdrawing officially a) during the first five class days receives a refund of 80 percent of the applicable portion of the tuition and fees; b) during the second five class days, 70 percent; c) during the third five class days, 50 percent; d) during the fourth five class days 25 percent; e) after the fourth five class days, no refund. If a student is using the installment payment plan, the student's refund is calculated on the total tuition and fees assessed for the semester and then netted against the balance still owed to the University.

Summer terms are considered as one session for refund/drop purposes. If courses are to be dropped in either term, please refer to census dates for refund purposes. A student who wishes to withdraw from the summer session must withdraw from the total courses registered for in both terms of the summer session. In the summer session, a student withdrawing officially a) during the first, second, or third class day receives a refund of 80 percent of the applicable portion of the tuition and fees; b) during the fourth, fifth, or sixth day, 50 percent; c) the seventh day of class and thereafter, no refund.⁹

A student who enrolls in The University for a given term and who is subsequently required to withdraw because of academic dismissal the previous term, receives a full refund of all tuition and fees.

Refunds of tuition, applicable fees, general fees, and student service fees are made for courses dropped during the first twelve class days in the fall and spring or during the first four class days in a summer term if the student paid more than the minimum required and if the student has dropped below the total number of hours for which he or she originally registered provided the student remains enrolled for the semester or term. Tuition and applicable fees for added courses are collected daily, net of dropped courses, during the add/drop period.

The University will refund tuition and fees paid by a sponsor, donor, or scholarship to the source rather than directly to the student who has withdrawn if the funds were made available through the institution.

No refunds are made until fifteen days have elapsed from the census date. Refund checks are mailed to the address indicated when the student withdraws from The University. Students entitled to refunds should allow ten working days after the fifteen-day clearing period for receipt of the refund.

DEBTS OWED THE UNIVERSITY

In the event of non-payment of debts owed to The University (or failure to meet admission requirements), any of the following actions may be taken.

1. Denial of readmission of the student.
2. Denial of further registration.
3. Withholding of official transcripts.
4. Withholding a diploma to which the student would otherwise be entitled.
5. Withholding of grades.

When a student has any of the above actions against his or her record, it is the student's responsibility to clear obligations with The University and see that the Registrar's Office is notified. No further services of The University will be provided until all obligations are cleared.

A student who pays tuition and fees with a check which is not subsequently honored by a bank and the fault is not that of the bank and who does not make payment within five days will be withdrawn from The University by the Registrar for non-payment of tuition and fees.

⁹These refund percentages are applicable to tuition, the supplementary fees, the general fee, laboratory fees, University Center fee, and the student services fee.

IV. INSTITUTIONAL POLICIES CONCERNING STUDENTS

RULES AND REGULATIONS OF THE BOARD OF REGENTS

All students of The University of Texas at San Antonio are subject to the rules and regulations governing student conduct and discipline as set out in Part One, Chapter VI, of the *Rules and Regulations* of the Board of Regents of The University of Texas System and in the UT San Antonio *Institutional Rules on Student Services and Activities*.

The Regents' *Rules* and the *Institutional Rules on Student Services and Activities* have full force and effect as they concern all UT San Antonio students. The Regents' *Rules* may be consulted in the offices of the President, the Vice Presidents, and the Deans and in the John Peace Library.

A student at The University neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to comply with both the penal and civil statutes of the State and the Federal governments, the *Rules and Regulations* of the Board of Regents, and the policies and procedures of The University of Texas at San Antonio.

The *Institutional Rules on Student Services and Activities* may be obtained in the Office of the Dean of Students.

STUDENT ACTIVITIES

Student activities revolve around a variety of student organizations reflecting the social, service, cultural, political and academic interests of the diverse student community. Student activities are designed to enhance classroom education, to assist students in developing leadership qualities, to develop interpersonal skills and to create a stimulating campus environment.

Various programs, activities, and services are coordinated through the Student Activities Office. They include University Center Programs, UTSA Alumni Association functions, Cheerleaders, a Student Activity Calendar, and liaison with VIA Metropolitan Transit. The *Student Organizations Guide*, *Parliamentary Procedures Simplified*, and *Factbook for Student Organizations* are publications made available through this office. An inner-campus message center for registered student organizations is located in the Student Activities Complex in the University Center.

HAZING

Hazing in state educational institutions is prohibited by state law (Section 4.19, Chapter 4, Title I, *Texas Education Code*). Hazing with or without the consent of a student is prohibited by The University of Texas System, and a violation of that prohibition renders both the person inflicting the hazing and the person submitting to the hazing subject to discipline. (Regents' *Rules and Regulations*, Chapter VI, Section 3.6).

STUDENT HEALTH SERVICES

The application for admission to The University of Texas at San Antonio includes a Health Information Form. This form should be completed by the student and returned to The University Student Health Center before the student can register.

When The University is in session, a registered nurse is on duty during normal class hours, and, when needed, a referral is made to a physician for medical treatment. The University Student Health Center has only limited medical capabilities.

Students are advised to carry health and accident insurance. Out-of-town students should have documents to verify insurance coverage to avoid possible delays in obtaining medical treatment.

COUNSELING CENTER

The Counseling Center provides professional services which are designed to help meet the personal and developmental needs of students.

Services offered include individual sessions for personal, educational, and vocational concerns as well as services to couples with relationship difficulties. Group sessions are offered on a regular basis on topics such as assertion training, interpersonal communication skills and self-esteem.

In addition, self-help cassette tapes are available for listening in person or by phone on a variety of topics ranging from friendship-building to suicidal crisis.

Counseling psychologists in the center deal with a variety of student concerns and utilize counseling techniques, psychological assessment, and other aids to assist students. All counseling is free, confidential, and on a voluntary basis.

TESTING CENTER

The Testing Center provides a university-wide testing service. National and state tests are given on national and state testing dates. For the student seeking a better self-understanding, interest and personality inventories, achievement tests and intelligence tests may be scheduled by appointment in the Testing Center.

Students are encouraged to satisfy degree requirements through credit by examination (covered in Section VI). A brochure on Credit by Examination at UT San Antonio is available concerning the various tests which are accepted for credit by The University. For additional information students should consult the Credit by Examination section of the present catalog and the Credit by Examination brochure available from the Testing Center, as well as from the Admissions Office.

ADVISEMENT

Advisement for *undeclared* majors is a function of the Office of Student Information and Retention. This office provides basic information to students who are undecided about their educational goals. Academic advising for *declared* majors is carried on in the four Colleges, and information should be sought in the academic Deans' offices.

Advisement for all freshmen enrolled in the Provisional Admission Program is coordinated by the Office of Student Information and Retention.

FINANCIAL AID

Programs to assist students and parents in financing an education at UT San Antonio are administered by the Office of Student Financial Aid. Students may apply for financial assistance through scholarship, grant, work study and loan programs.

Eligibility for the majority of financial aid programs is determined through an analysis of a family's financial need. This analysis is made after the student completes and submits a financial statement to an agency approved by the Federal government. Before a student can be considered for most forms of financial aid, he or she must:

1. be officially admitted to The University;
2. file a Financial Aid Form with the College Scholarship Service;
3. file a UT San Antonio application for Financial Aid with the Office of Student Financial Aid;
4. meet deadlines set by the Office of Student Financial Aid;
5. not be in default on any Title IV, HEA loan made for attendance at any institution nor owe a refund on any Title IV, HEA grant received for attendance at any institution;

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6. provide proof of eligibility if not a citizen of the United States;
7. provide documents which support the information reported on the application for aid, if requested;
8. if a transfer student, submit a Financial Aid Transcript from each post-secondary school attended whether financial aid was received or not (contact the Financial Aid Office for forms), and
9. make satisfactory academic progress as required for financial aid eligibility to fulfill federal requirements;
10. be working toward a degree and classified by the Admissions Office as seeking a degree.

Financial aid programs available to undergraduate students include Collège Work Study, Pell Grant, Supplemental Educational Opportunity Grant, Texas Public Education-State Student Incentive Grant; the Perkins Student Loan, Teacher Education Loan, Future Teacher Loan, several Guaranteed Student Loan programs, and various scholarships. The same programs are available to graduate students except the Pell and Supplemental Grants.

Consideration for the Pell Grant and the Guaranteed Student Loan programs is automatically given to any undergraduate student who completes the application process. However, all other major financial aid programs have a limited amount of funds which must be granted on a first-come, first-served basis. Therefore, students are strongly encouraged to have their completed application at the Office of Student Financial Aid by March 31st of each year.

Application forms and detailed instructions on applying are available through the Office of Student Financial Aid.

CAREER PLANNING AND PLACEMENT CENTER

The Career Planning and Placement Center offers a variety of services and programs in response to the placement needs of UT San Antonio students and alumni.¹

Placement programs available at the Center are designed to assist students in the development of effective job hunting skills and methods, e.g., effective letter writing, effective mail campaigns, resume development, and interview skills training. Students are seen on a "drop-in" or appointment basis at the Career Planning and Placement Center.

The Center also provides the following services: part-time and summer employment opportunities; career placement for students and alumni after graduation. Students and alumni may establish a placement file and use the on-campus interview schedule to meet the representatives from business, industry, and government to explore professional employment opportunities.

To assist students in career development activities, the Center provides information on employment opportunities related to their college majors. This information includes an annual report on the placement activities of UT San Antonio graduating students, average starting salary, the types of positions accepted, and when available, the relationship between fields of study and accepted positions.

Students and alumni are encouraged to use the career, vocational, and educational counseling services of the Center and its Career Resource Library. Students who have not decided which college major they wish to pursue can participate in the life planning workshops, value clarification labs, decision-making seminars (labs), and career exploration symposia offered by the Center. Vocational testing, including aptitude and interest inventories, is also available.

¹Fees for services of the Career Planning and Placement Center are set forth in Section III of this catalog.

TEACHER PLACEMENT SERVICE

The Teacher Placement Service, located in the Office of Teacher Certification and Placement, assists students from all Colleges and Divisions within The University of Texas at San Antonio who seek employment in the field of education by facilitating contact and communication between students and employers.²

The services of the Teacher Placement Service are available to all presently enrolled students, as well as alumni of The University of Texas at San Antonio.

INTERCOLLEGIATE ATHLETICS

UT San Antonio fields men's and women's teams for intercollegiate competition in Division I of the NCAA. Men's sports include: basketball, cross country, indoor track, outdoor track, tennis, golf, and soccer. Women's sports include: basketball, cross country, volleyball, tennis, and indoor track.

INTRAMURAL AND RECREATIONAL ACTIVITIES

UT San Antonio offers a wide range of intramural programs and recreational activities. The facilities available in the Convocation Center and the Physical Education Building include gymnasiums for basketball and volleyball, weight machines, badminton and shuffleboard courts, and a jogging path. Also available is a 400-meter synthetic track with a grass playing infield, two intramural fields for soccer, touch football and softball, and a tennis center. Students are able to participate in tennis, track, volleyball, badminton, shuffleboard, table tennis, softball, soccer and touch football.

LIVING ACCOMMODATIONS

Resident student facilities consist of a 520-student resident hall and an activity center. Rooms in Chisholm Hall are furnished with desks, chairs, and twin beds. All rooms are double occupancy and include a private bath. The activity center includes a snack bar, lounge, and indoor swimming pool. For more information concerning on-campus housing, contact: Housing Office, The University of Texas at San Antonio, San Antonio, Texas 78285 or call 512/694-6700.

An off-campus housing directory is available in the Office of Student Services to assist students in finding living accommodations in the San Antonio community.

IDENTIFICATION CARDS

Student identification cards are mandatory. A \$5.00 non-refundable charge for the Student Photo ID card is assessed at the time of registration. The \$5.00 charge is a one-time charge and the card is valid as long as the student is currently enrolled. A \$10.00 charge is assessed to replace a lost card. A \$2.00 charge is assessed to replace a lost temporary card.

DIRECTORY INFORMATION

All educational records of students at The University of Texas at San Antonio are maintained in accordance with State and Federal laws.

Pursuant to the Family Educational Rights and Privacy Act, Directory Information at UT San Antonio includes the following:

²Fees for the Teacher Placement Service are set forth in Section III of this catalog.

Student's Name
Current and Permanent Address
Telephone Listing
Date and Place of Birth
Major Field of Study, including concentration
Classification
Participation in Officially Recognized Activities and Sports
Weight and Height of Members of Athletic Teams
Dates of Attendance
Degrees and Awards Received
Most Recent Previous Educational Agency or Institution Attended

A student's consent is presumed, unless a written request to restrict the information as confidential is made by the student in the Registrar's Office on a prescribed form no earlier than the first day of registration and no later than the 12th class day in a semester or the 4th class day in a summer term. This consent or restriction remains in effect for the duration of the semester or summer term and must be refiled each subsequent semester or term that the student wishes to restrict the information. In those cases where a student files a request for restriction of information, such information is treated as confidential, and, in response to public inquiries. The University will verify only whether an individual is currently enrolled.

For more specific information concerning the disclosure, review, release, and confidentiality of student records under the Family Educational Rights and Privacy Act of 1974, 20 U.S.C. Section 1232g, consult the *Institutional Rules on Student Services and Activities* available in the Office of the Dean of Students.

ORIENTATION

An orientation program is available to acquaint new students with the purposes and programs of The University, and with the academic advisement and registration procedures. This program is planned and implemented through the Division of Student Services.

LOST AND FOUND

All abandoned articles found on The University campus are turned in to the University Police office. Items can be claimed upon proper identification of ownership. Any article not claimed within sixty (60) days will be turned over to the Business Manager for final disposition.

HANDICAPPED STUDENTS

Handicapped students requiring special assistance should contact the Division of Student Services.

INTERNATIONAL STUDENTS

Foreign students who are enrolled at UT San Antonio should contact the Division of Student Services for assistance.

THE UNIVERSITY CENTER BUILDING

The University Center Building, located on the West Paseo between the Humanities Business Building and the Physical Education Building, opened in summer 1986. The two-story, 42,000 square foot facility houses a lounge, cafeteria, recreation room, tele-

vision rooms, and cafe. Additionally, a large multi-purpose room, meeting rooms, and print shop are available in the Center. A student activity complex on the second floor provides work space for registered student organizations, student government offices, the University Center Program Council Office, and the Student Activities Office. The Ticketmaster outlet is located at the Information Desk in the University Center.

V. ADMISSION REQUIREMENTS

ADMISSION

Admission requirements for undergraduate study at UT San Antonio are designed so that students admitted will have a high probability of success in undergraduate academic work. The criteria for the various classifications of admission are set forth in the following paragraphs. Each admission case is reviewed individually and exceptional circumstances should be discussed with an admissions counselor. The University will admit all students who are holders of bona fide University of Texas at San Antonio scholarships designated by the President.

TEXAS ACADEMIC SKILLS PROGRAM (TASP) EXAMINATION

The Texas State Education Code requires that all students who enter public institutions of higher education in the fall of 1989 and thereafter must be tested for reading, writing and mathematics skills. This includes all full-time and part-time freshmen enrolled in a certificate or degree program, any non-degree seeking students prior to the accumulation of nine or more college semester credit hours or the equivalent, and any transfer students with fewer than sixty semester credit hours or the equivalent who has not previously taken the test.

Performance on the test will not be used as a condition of admission. There is a test fee. This test fee will be paid by the student.

A student may not enroll in any upper-division course, the completion of which would give the student sixty or more semester credit hours or the equivalent until the student's test results meet or exceed the minimum standards in all test scores. Other assessment procedures may be used in exceptional cases to allow a student to enroll in upper-division courses in cases where student test results do not meet minimum standards. (Texas Education Code, Section 51.306)

For additional information, consult the UTSA Schedule of Classes, contact the Office of Admissions and Registrar, JPL 1.01.16, or contact the Testing Center, MS 4.03.55.

ADMISSION OF FIRST-TIME FRESHMEN

In-state applicants for admission who have graduated from an accredited Texas high school within five years of the date of first enrollment at UT San Antonio and who have never attended a college or university must have a minimum total score on either the Scholastic Aptitude Test (SAT) of the College Entrance Examination Board or the American College Testing Program (ACT) corresponding to their high school rank in class as indicated in the following table:

<i>High School Rank in Class</i>	<i>Minimum Total SAT Score</i>	<i>Minimum Total ACT Score</i>
Top 10%	Score must be submitted; no minimum score is required	Score must be submitted; no minimum score is required
Top 25% (but not top 10%)	700	15
Second 25%	750	17
Third 25%	800	19
Fourth 25%	850	21
GED Test	850	21

Any high school senior who takes the ACT or SAT and lists UTSA as one of the institutions to receive his/her test scores will be provided automatic admission information

and, where possible, an admission decision within several weeks from the time UTSA receives the student's test scores from ACT/SAT. All high school seniors who have their test scores sent to UTSA will be provided an application for admission and other admission information.

The Admissions Office will determine the admission status of each student and forward an application and letter to the student indicating his/her admission status as well as information on what else remains to complete the admission process. Those scoring 21 on the ACT or 850 on the SAT will be granted automatic admission (contingent upon graduation from high school) and will need to complete the application, and return it to the Admissions Office along with a sixth or seventh semester high school transcript. Those making minimum scores but needing the proper rank-in-class to be accepted will be apprised of this information but they, too, must return the completed application to begin the admission process.

Both in-state and out-of-state applicants for admission who have graduated from an accredited high school five or more years prior to the date of first enrollment at UT San Antonio and who have never attended a college or university are eligible for admission regardless of high school rank in class and irrespective of SAT or ACT scores.

Out-of-state applicants for admission who have graduated from an accredited high school within five years of the date of first enrollment at UT San Antonio must be in the top half of their graduating class and must have minimum SAT or ACT scores corresponding to those required for in-state applicants who graduate in the top 25 percent or the second 25 percent of their class.

Applicants furnishing results on the General Educational Development Test are required to have an average standard score of 45 or above on the five tests in the battery and to have no scores less than 35 on any of the five tests. GED tests taken more than five years prior to application do not require SAT or ACT scores.

Recommended preparation. High school students who anticipate applying to UT San Antonio are strongly encouraged to include in their preparation for university study work in courses involving language skills; courses in quantification skills; and courses in subjects contributing to a broad academic background, such as English and foreign languages, speech, social sciences, history, mathematics and sciences, and the fine arts. Students enrolling in UT San Antonio courses in which they have prior knowledge are encouraged to earn credit toward graduation through the Credit by Examination Program. The nature and number of high school units¹ are suggested as follows:

<i>Subject</i>	<i>Units</i>
English	4
Mathematics: algebra, geometry, trigonometry, and advanced mathematics	3 or more
One foreign language	2 or more
Natural science	2 or more
Social science	2 or more
Fine arts	1 or more

These specific units, although not required for admission, are recommended since The University expects each applicant to be prepared for academic work at the university level.

Early Admission. Applicants for admission as first-time freshmen who are attending high school at the time of application and who meet the rank-in-class and SAT and ACT score requirements during their senior year, are admitted pending certification of high

¹A unit represents a year of study in one subject at an accredited secondary school.

school graduation. Applicants not meeting these requirements prior to graduation are reconsidered for admission upon submission of final transcripts or new test scores.

ADMISSION OF TRANSFER STUDENTS

Applicants for admission who have earned less than 30 semester hours of credit from accredited colleges or universities must:

- 1) Meet the same rank-in-class and SAT, or rank-in-class and ACT, requirements as first-time freshmen;
- 2) Have at least a "C" average (2.0 grade-point average on a 4.0 scale) in all college or university hours attempted;
- 3) Must be in good standing at the last institution attended; and
- 4) All transfer students must be eligible to return (e.g., free of suspension, dismissal, or enforced withdrawal) to all previous institutions attended.

Applicants for admission who have earned 30 or more semester hours of credit from accredited colleges or universities must:

- 1) Have at least a "C" average (2.0 grade-point average on a 4.0 scale) in all college or university hours attempted; and
- 2) Must be in good standing at the last institution attended.
- 3) All transfer students must be eligible to return (e.g., free of suspension, dismissal, or enforced withdrawal) to all previous institutions attended.

Applicants for admission as transfer students who are enrolled at another accredited college or university at the time of application for admission and who have at least a "C" average on all college-level work attempted to date at other institutions may be admitted pending receipt of final transcripts verifying the cumulative "C" average and good standing. For applicants not meeting these requirements, determination of eligibility for admission is deferred until all final transcripts are received.

NOTE: See Declaration of Previous College Work Attempted in this section of the catalog.

ADMISSION OF INTERNATIONAL FRESHMEN STUDENTS

All applications from persons holding non-permanent visas will be processed as International. This includes both applications received from other countries and requests to transfer from a U.S. high school, college or university. All applicants must:

1. Have credits equivalent to those of students entering from an accredited secondary school in the United States, as determined by the Admissions Office.
2. Have superior grades on work done in secondary school, as determined by the Admissions Office.
3. Submit scores from the Test of English as a Foreign Language (TOEFL). A minimum score of 550 on the TOEFL is required. Subsequent English tests and preparation may be required by a student's advisor if his or her performance in English is unsatisfactory. TOEFL scores are not required for international students from countries where English is the primary language of instruction and the language spoken in the home; nor are TOEFL scores required for non-citizens of the United States graduating from United States high schools and satisfactorily completing a minimum of two units in English, although a composite SAT or ACT test score appropriate to rank in class is required.
4. Submit a statement guaranteeing the student's ability to pay all expenses while a student at The University, if attendance under the F-1 (student) visa is anticipated. The statement may be sent from a parent or guardian when endorsed by a bank or other reliable institution, or from a United States citizen who will accept responsibility for the student's financial needs.

5. Have applications and supporting credentials on file in the Admissions and Registrar's Office by the admission deadline: Fall, June 1; Spring, October 15; Summer, March 1.

ADMISSION OF INTERNATIONAL TRANSFER STUDENTS

All applications from persons holding non-permanent visas will be processed as International. This includes both applications received from other countries and requests to transfer from a U.S. high school, college or university. International students who have attended a college or university in a country other than the United States must:

1. Have qualifications equal to those required for transfer from a college or university in the United States; and
2. Satisfy requirements 3, 4, and 5 above for international freshmen students.

To be eligible for admission, international students who have attended another college or university in the United States must:

1. Have completed at least 30 semester hours of credit with a "C+" average (2.5 on a 4.0 scale) on all work attempted; and
2. Satisfy requirements 3, 4, and 5 above for international freshmen students.

TOEFL scores are not required for non-citizens of the United States graduating from United States colleges and universities with at least a baccalaureate degree.

PROVISIONAL ADMISSION PROGRAM FOR FRESHMEN

Any Texas resident applying as a freshman, who is a graduate of any accredited high school, but who does not qualify for admission due to an inadequate SAT or ACT score or high school record, may be admitted, except for the fall term, on a provisional basis. Admission to the provisional program is granted provided the student has not previously enrolled in credit courses in any other institution of higher education following high school graduation. Students may, however, enroll in remedial courses prior to attending UTSA, although remedial courses may not be counted toward the 12-hour provisional requirement. Provisional admission students may enroll initially in the summer or the spring semester. If the initial semester of enrollment is in the summer the student must enroll for BOTH terms. During this time provisional students are given an opportunity to demonstrate that they can perform college-level work and that they can reasonably be expected to make progress toward a degree. Once a student has been admitted to the provisional program, advisement is provided by The Tomas Rivera Office of Student Information and Retention.

Students must demonstrate ability to perform college work by obtaining an overall "C" average (2.0 on a 4.0 scale) in 12 semester hours of work. A student admitted to the Provisional Admission Program is required to take courses selected from English, mathematics, natural sciences, social sciences, humanities, and foreign languages. It is also recommended that students enroll in C&I 1702, a two-hour study skills course; however, this course may not be counted toward the 12-hour requirement. Courses in other disciplines may not be taken until the provisional status is removed. Those who do register in courses other than provisional disciplines will be dropped from all courses outside the provisional program. Although students are expected to complete the 12-hour requirement in their initial enrollment at UTSA, a minimum of six semester hours is absolutely required. If a student enrolls for the minimum of six semester hours, but less than 12 semester hours, and does not earn a 2.0 grade-point average, but earns at least a 1.50 grade-point average, the student may continue as a provisional student in the next term. After 12 hours have been completed, the required cumulative grade-point average of 2.0 must have been reached, or the student will be placed on academic dismissal. Before reinstatement can be considered, the student must submit

a transcript from other colleges or universities attended, showing at least 30 hours of course work with at least a 2.0 grade-point average. Should a student be enrolled in excess of 12 semester hours, all grades will be calculated in the final grade-point average during the semester in which the 12th hour is completed. Upon successful completion of the 12 hours of work from the approved courses, the student will be allowed to request a degree-seeking status in a subsequent semester.

ADMISSION AS A SPECIAL STUDENT

An applicant who wishes to enroll in courses at the undergraduate level only, without pursuing a degree at The University of Texas at San Antonio, should apply for admission as a special student. A special student may register for any undergraduate course for which the prerequisites have been met and in which space is available.

Admission as a special student requires that the applicant have at least a "C" average (2.0 on a 4.0 scale) on the last 30 semester hours attempted as well as be in good standing at the last accredited college or university attended. Applicants with less than 30 semester hours attempted must meet the same admission requirements as first-time freshmen and have at least a "C" average on any college or university coursework attempted and be in good standing at the last institution attended. Even though admission is based on the last 30 hours attempted, students must list all colleges and universities attended on the application for admission. To be admitted later as a regular degree-seeking student, the special student must apply for admission and meet the same admission requirements as listed above for transfer students. Beginning freshmen and international students may not apply as special students.

ADMISSION OF SUMMER TRANSIENT STUDENTS

An applicant who wishes to enroll for a summer session only, in courses at the undergraduate level without pursuing a degree at The University of Texas at San Antonio, should apply for admission as a transient student. In order to qualify as a transient student at the undergraduate level, the applicant must provide a statement of good standing from the Registrar's Office of the college or university last attended, as well as an application for admission. Even though admission is based on good standing at the last institution attended, students must list all colleges and universities attended on the application for admission.

Transient students may register for any courses for which they have the necessary prerequisites and in which space is available. A student registered in this capacity cannot register for the following term unless he or she has been admitted as a degree-seeking or special student according to the provisions set forth above. Beginning freshmen and international students may not apply as summer transient students.

ADMISSION OF HIGH SCHOOL STUDENTS

Selected high school seniors may be admitted in order to enroll in university courses while completing their high school studies. Students seeking this admission category must score above the average ACT/SAT scores required for admission from high school graduates. Students must be recommended for the program of study by the high school counselor, and must be approved for enrollment by the Dean(s) of the College(s) in which they anticipate taking courses.

UNIVERSITY HONORS PROGRAM

The University Honors Program is a rigorous four-year curriculum of disciplinary and interdisciplinary classes, supervised research, and ongoing faculty advisement. Hon-

ors students, who are selected on the basis of grades, test scores, recommendations, and a writing sample, form a unique group within The University. Students wishing to apply for admission to The University Honors Program should write to the Director of the Program before the deadline for regular admission to The University. Students currently enrolled in The University who wish to apply for The Honors Program should contact the Program Director.

HONORS PROGRAM FOR YOUNG SCHOLARS

The University of Texas at San Antonio Honors Program For Young Scholars, conducted during the first session of summer school, is an opportunity for talented high school students to enroll in selected university courses and earn university credit. The program is limited to students who have completed the tenth grade by the date classes begin and is not available to seniors. Selection criteria include grades, teacher recommendations, interviews, and, in some disciplines, test scores or submission of materials that indicate potential for the program. Students pay tuition and fees as described in the Tuition and Fees section of this catalog. Scholarships awarded solely on the basis of financial need are available for a limited number of students who meet the admission criteria of the program.

APPLICATION DATES

Students are urged to apply for admission as early as possible so that matters regarding admission can be resolved well in advance of the beginning of a term. Applications for admission are accepted as early as nine months before the term in which the student wishes to enter The University. The latest a completed application and all required supporting documents are accepted is July 1 for the Fall Semester, December 1 for the Spring Semester, and May 1 for the Summer Sessions. Failure to meet these admission deadlines will defer admission until a subsequent term.

ADMISSION PROCEDURES

Each applicant for admission is responsible for ensuring that all required support documents (e.g., application form, test results, and required transcripts) are on file in the Admissions Office in accordance with admission deadlines, since admission is not granted until the applicant's file is complete. All documents submitted in support of an application become the property of The University and cannot be returned.

Students who apply for admission to The University of Texas at San Antonio for any term and do not register, must re-apply for admission if they wish to enroll at a later date. A subsequent application for admission must be in accordance with current admission requirements. New transcripts, test scores, and all other supporting documents are required since files for admitted students who do not register are not retained.

DECLARATION OF PREVIOUS COLLEGE WORK ATTEMPTED

Students are not at liberty to disregard previous college work attempted. All students transferring to The University of Texas at San Antonio *must* list *all* colleges attended on their UT San Antonio application for admission. Failure to do so will result in the rejection of the application, withdrawal of any offer of acceptance, cancellation of enrollment, permanent dismissal from The University or other appropriate disciplinary action.

RE-ADMISSION POLICIES AND PROCEDURES

Former UT San Antonio students who have not been in attendance for one or more long semesters (Fall or Spring) must file an application for readmission by the application deadline.

All former students returning to UT San Antonio who have attended other institutions of higher education since they were last enrolled must submit an official transcript from each such institution. Eligibility for re-admission for any former student depends on the student's academic status at the conclusion of his/her last UT San Antonio enrollment and on any subsequent college or university work attempted.

ADMISSION TO TEACHER CERTIFICATION PROGRAMS

The University of Texas at San Antonio is approved by the Texas Education Agency to recommend students for teaching certificates in various baccalaureate degree areas. Students who wish to prepare for teaching should apply for admission to The University through the Admissions Office either as a degree-seeking or special student, and for admission to a certificate program through the Office of Teacher Certification and Placement in the Division of Education.

Applications for admission to the Teacher Certification Program at UT San Antonio are submitted when the student has attained junior standing (60 semester hours), a 2.5 overall grade-point average, the signatures of three UTSA professors, and passing scores on the Pre-Professional Skills Test. However, all students seeking Teacher Certification should seek counseling in the Office of Teacher Certification and Placement as soon as they are admitted to UT San Antonio to ensure accurate course selection. Some coursework in the Teacher Certification Program may be completed before formal admission to the Teacher Certification Program is granted.

VI. GENERAL ACADEMIC REGULATIONS

REGISTRATION

All students who attend classes at The University of Texas at San Antonio must be registered officially or must be approved auditors. Registration instructions are included in the Schedule of Classes issued each term. Questions regarding registration should be directed to the Registrar's Office.

The University does not guarantee the availability of particular courses or sections, and admission to classes is permitted only until the maximum number of students allowable in any section has been reached. The University reserves the right to cancel any course or section in which the number of registrants does not warrant its continuation.

LATE REGISTRATION

Late registration permits students to register during the allowed time indicated in the schedule of classes issued each term. Students who register late are charged an additional \$5.00 the first day of late registration and an additional \$2.50 per day thereafter to a maximum of \$15.00 for any one term. This fee is non-refundable. Instructions for late registration are available in the Registrar's Office. *Students are not permitted to register after the close of late registration.*

Students who register late are responsible for completing any work missed in the courses for which they enrolled during the time the course was in session prior to their being registered. It may be necessary for late registrants to select courses in which to enroll from a reduced schedule since many courses will have been closed at their capacities.

ADDING COURSES

After registration, but during the first week of classes in a semester, or the first two class days in a summer term, a student may add a course only with the approval of the course instructor, the student's advisor, and the Division Director for which the course is offered. A special student should seek approval of the course instructor and Dean of the College in which the course is offered. A student seeking certification only should seek approval of the course instructor and the Director, Office of Teacher Certification and Placement. After the first week of classes and through the twelfth class day of any semester, or on the third or fourth class day of any summer term, the additional approval of the Dean of the College in which the course is offered is required. A special student and a student seeking certification only should seek the additional approval of the Dean of the College in which the course is offered. After the twelfth class day of any semester or after the fourth class day of any summer term, students may not add a course except for extremely rare and extenuating circumstances as approved by the Vice President for Academic Affairs. Undergraduates seeking to add a graduate course in any of these time periods must obtain the special approvals specified in the sections "Enrollment in Graduate Courses for Undergraduate Credit" and "Enrollment in Graduate Courses for Graduate Credit" in this catalog. The University Calendar indicates the deadline dates for adding courses.

DROPPING COURSES

Courses officially dropped during the add/drop period (Census Date) do not appear on the student's transcript. A student who drops courses after the add/drop period and through the first nine weeks of a semester or the first three weeks of a summer term may drop courses and receive an automatic grade of "W." *The student is responsible for filing the change with the Registrar's Office so that the action becomes official.*

Students may not drop an individual course later than the last day of the ninth week of classes or after the first three weeks of a summer term.

The University Calendar indicates the deadline dates for students to drop courses each term.

During the first nine weeks of a semester or the first three weeks of a summer term, the instructor may drop a student from class for non-attendance. The student will receive a grade of "W." After these periods, the instructor may recommend to the Dean that a student be dropped from class when the instructor can show that unusual circumstances exist to warrant such action. The Dean, with the approval of the Vice President for Academic Affairs, may drop a student from class; the student will receive a grade of "W" if the student was passing at the time of the drop or a grade of "F" if the student was failing at the time of the drop.

WITHDRAWAL PROCEDURES

A student who finds it necessary to withdraw from The University (i.e., drop all courses for which he/she is enrolled) is required to go through The Office of Student Information and Retention prior to their withdrawal. The student must then file the form with the Registrar's Office in order to withdraw officially. Students who officially withdraw from The University during the first nine weeks of a semester or the first three weeks of a summer term, will receive a grade of "W." Students who officially withdraw after the first nine weeks of classes in a regular semester or the first three weeks of a summer term will receive a grade of "W" for each class they are passing at the time of withdrawal and a grade of "F" for each class in which they are not passing at the time of withdrawal. Students may not withdraw from The University later than the first day of the week preceding final examinations. Students who withdraw from all classes are subject to The University's academic probation and dismissal regulations. Students withdrawing should refer to the regulations on refunds of tuition and fees.

AUDITING OF COURSES

UT San Antonio students and non-students who wish to audit a course may do so with the approval of the instructor and the Director of the Division in which the course is offered, providing there is space in the classroom after all registered students have been accommodated. A course must achieve its minimum size without auditors. Auditing entitles a student to listen and observe. Participation of an auditor in class is at the discretion of the instructor. No UT San Antonio credit is granted for courses that are audited.

All auditors must submit the Request for Audit Form to the Registrar. A UT San Antonio student pays an auditing fee of \$5.00 per course and auditors who are not registered UT San Antonio students must pay an auditing fee of \$25.00 per course. Unless you are enrolled in courses at The University, you are not allowed to audit courses which require a computer use fee. Non-student auditors who wish library privileges may receive them by filling out a Friend of the UTSA Library application at the Circulation Desk in the UTSA Library (John Peace Library Building, second floor) and paying a nonrefundable donation. Donations are \$15.00 September through August or \$7.50 for the months of June through August only. There are limits on the services offered to Friends of the UTSA Library card holders; further details are available from the Circulation Desk. Persons over 65 are permitted to audit without paying an auditing fee, if space is available.

Permission to audit may be obtained and fees paid beginning the first day of class through Census Date. No official record is made of enrollment in classes on an audit basis.

CHANGE OF MAJOR OR DEGREE

A student who wishes to change his/her major or degree objective must obtain the required forms at the Registrar's Office. The change is not official until the form has been completed and filed with the Registrar's Office. The Architecture and Engineering programs, as well as the College of Business, have specific requirements for admission. Students seeking to enter these programs should consult their program directors.

STUDENT CLASSIFICATION SYSTEM

Upper-division (junior and senior): A student who has earned 60 or more semester hours of credit.

Lower-division (freshman and sophomore): A student who has earned less than 60 semester hours of credit.

DEFINITION OF A FULL-TIME UNDERGRADUATE STUDENT

A full-time undergraduate student is one enrolled in twelve or more semester hours of credit during a fall, spring, or entire summer term.

COURSE NUMBERING SYSTEM

All courses are designated by four-digit numbers following a two- or three-letter abbreviation of the subject field. The first digit indicates the level of the course. All courses with a first digit of 1 or 2 are lower-division (freshman or sophomore) courses, and all courses with a first digit of 3 or 4 are upper-division (junior or senior) courses. All course numbers starting with 5 or higher are graduate courses.

The second and third numbers are used within the Colleges by each Division to distinguish individual courses.

The fourth digit indicates the semester hour value of the course.

The number of lecture and laboratory hours per week are provided in parentheses in the course description sections immediately following the course number and title. For example, (3-0) indicates three hours of lecture and zero hours of laboratory per week.

PREREQUISITES

Prerequisites are stated for many courses listed in this catalog. The purpose of the prerequisite is to advise the student of the background expected of all students in the course. When a student has not met the specific prerequisites listed, he/she may, under special conditions, obtain permission to register from the instructor of the course. It is the student's responsibility to be sure that he/she has met all prerequisites before enrolling in any course.

GRADING SYSTEM

Hours attempted. The number of hours attempted is the total number of hours for which a student has enrolled and received grades of "A," "B," "C," "D," or "F" (see below), except as provided for repeated courses.

Hours earned. The hours earned by a student are the number of semester hours of credit earned in which grades of "A," "B," "C," "D," or "CR" have been received (see below).

Grade-point Average. The UT San Antonio grade-point average (GPA) is determined by dividing the number of grade points earned at UT San Antonio by the number of semester hours attempted at UT San Antonio.

Credits and grades for work completed at other institutions or credits earned by examinations are not included in the UT San Antonio grade-point average.

Grade symbols and grade points.

<i>Symbols</i>	<i>Grade Points</i>
A	4
B	3
C	2
D	1
F	0
CR	0
EP	0
W	0
IN	0
NR	0
NC	0
EX	0

EXPLANATION OF GRADE SYMBOLS

"A" through "F." A = Outstanding; B = Above average; C = Average; D = Below average but passing (See Credit-No Credit grading policy); F = Failure.

"CR" or "Credit." The symbol "CR" is used to indicate that satisfactory performance has been demonstrated by examination (see Credit by Examination section), or in a course taken under the Credit-No Credit grading option.

"NC" or "No Credit." The symbol "NC" is used to indicate unsatisfactory performance in a course taken under the Credit-No Credit grading option.

"EP" or "Postponement of Final Examination." The symbol "EP" is used to indicate that a student has been permitted to postpone a final examination. See "Postponement of Final Examinations Provisions," in this section of the catalog.

"W" or "Withdrawal." The symbol "W" is used to indicate that at the time of withdrawal from a course, the student's grade was passing.

"IN" or "Incomplete." The grade of "Incomplete" ("IN"), subject to the regulations of this section, may be assigned a student at the discretion of the instructor. The purpose of the "Incomplete" grade is to allow a student to complete a course without repetition of the regular work of a course. It may not be assigned when a definite grade can be given for the work done. The "Incomplete" grade is given to indicate that some part of the work of a student in the course has, for good reason, not been completed, while the rest has been satisfactorily completed. The student must have been in attendance at least three-fourths of the term.

Incomplete work must be made up no later than the end of the final exam period, one year from the semester the incomplete was received, and before the student's graduation. If the work is not completed within this time the "Incomplete" changes to a grade of "F" or "NC."

Whenever a grade of "Incomplete" is assigned, the instructor is required to file a "Requirements for Removal of Incomplete" report with the Registrar's Office.

"NR" or "No Report." The grade "No Report" ("NR") may be assigned a student only by the Registrar. This symbol is assigned only when in unusual circumstances it is not possible to obtain the student's proper grades by the deadline necessary for pro-

cessing grades at the close of the term and is replaced with the official grade as soon as possible.

"EX" or "Expelled". The symbol "EX" is used to indicate that the student has been expelled from The University.

CREDIT BY EXAMINATION

A student at The University of Texas at San Antonio may normally satisfy general education and specific degree requirements through credit by examination. Except for one type of examination, credit earned by this means is not counted as satisfying minimum residence requirements. The exception noted pertains to credits earned by challenging UT San Antonio undergraduate courses; these credits are counted toward the minimum residence requirements but are not included in the calculation of the student's UT San Antonio grade-point average. Credit cannot be earned by examination for courses which are used to fulfill the statutory history and government General Education Requirements in excess of three semester hours in history and three semester hours in government or political science.

It is not necessary to be a UT San Antonio student to take credit by examination. Credit based on CEEB examinations, however, is not awarded until the individual is registered at UT San Antonio.

Unsuccessful attempts to earn credit by examination do not become part of the student's official academic record.

Credit cannot be earned by examination which could duplicate or repeat credit earned for college or university courses. Nor can a student receive credit for a course for which he or she has already received credit by examination.

A brochure on Credit by Examination at UT San Antonio is available from the Testing Center, Office of the Dean of Students, on the various tests which may be accepted for credit at The University. The brochure describes the tests available, when and where they are given, their costs, procedures for having test scores submitted for consideration for credit, the amount of credit that may be earned, and how to obtain additional information on each test.

The symbol "CR" (Credit) is awarded for all credit earned by examination.

CREDIT-NO CREDIT GRADING POLICY

A credit-no credit grading option is provided to encourage undergraduate students to expand their knowledge of fields outside their major area of interest.

A. Student Option

1. A maximum of four courses may be attempted on a credit-no credit basis.
2. Credit-no credit courses will appear on the permanent record with a grade of CR if the grade is A, B, or C; NC if the grade is D or F; neither grade will affect the GPA at UTSA. The credit-no credit grade cannot be changed to a regular grade once the credit has been awarded.
3. Students must choose to take the course on a credit-no credit basis at registration and may not change that decision after the add period.
4. Only free electives may be taken on a credit-no credit basis; i.e., no course to be applied to the general education requirements or degree requirements or support work can be taken on a credit-no credit basis.
5. Credit-no credit courses cannot be counted toward the 30-hour residency requirements by transfer students who transfer to UTSA for their last 30 hours.

6. The Registrar's Office shall require the student to affirm, by his/her signature, the he/she is aware of the policies on credit-no credit and is abiding by them. If it is later discovered that the affirmative was incorrect, the credit-no credit grade will be returned to its original letter grade.

Students will be required to complete a Credit-No Credit Option Request preferably at the time of Registration, but no later than the add period.

NOTE: Some graduate schools place students who have taken courses on credit-no credit basis at a disadvantage in computing grade point averages for admission.

B. Mandatory Credit-No Credit Courses

Some academic divisions will require certain courses to be graded on mandatory credit-no credit basis. Enrollment in any of these courses will not affect the student's option to take up to four free elective courses on a credit-no credit option. Courses offered on a mandatory basis are so designated in this catalog.

UT SAN ANTONIO CHALLENGE EXAMINATIONS

Students enrolled at The University of Texas at San Antonio may "challenge," that is request an examination in, any UT San Antonio undergraduate course for which they have not already received credit. Not all courses, however, consist of materials in which comprehension can be evaluated by means of examination. The option of whether or not to grant the request rests with the instructor of the course.

To challenge a UT San Antonio undergraduate course by examination, the student must enroll in the course and within the first three weeks of the Fall or Spring semester and the first week of a summer term must request to complete it by examination. A Request for Challenge Examination form must be filed with The Office of Admissions and Registrar. A charge of \$15.00 is made for each course challenged by examination. If the student's performance on the examination is at the grade level of "C" or higher, a grade of "CR" is submitted at the end of the term by the instructor on the grade report for the course along with a credit by examination notation.

Unsuccessful attempts to earn credit by examination do not become part of the student's official academic record; the student may, however, elect to drop the course or complete the course on a regular basis following the evaluation of the examination(s) for the course(s) challenged.

Students admitted under the Provisional Admission Program may request to challenge by examination courses in those disciplines to which their enrollment is restricted.

Credits earned by challenging UT San Antonio undergraduate courses by examination apply to degree requirements as though the courses had been completed in the normal manner, except that since a grade of "CR" is awarded, such courses are not included in the UT San Antonio grade-point average. These credits are also counted toward the minimum residence requirements. Students may challenge the same UT San Antonio course by examination only once.

REPORTING OF GRADES BY THE FACULTY

Grades are reported by course instructors by term and are due in the Registrar's Office 48 hours following the final examination. Final grades cannot be withheld nor can reporting of them be deferred. Absence from a final examination should be reported as "EP," if a postponed examination has been authorized in accordance with the "Postponement of Final Examination Procedures" set forth in this catalog.

GRADE REPORTS

The Registrar's Office mails final grades as soon as they are compiled after the close of each semester and each summer term. The grade report reflects the grade that appears on the instructor's final grade sheet; subsequent changes are not included. Grades are mailed to the address on file in the Registrar's Office. Only one grade report is mailed; additional copies are not available. Grade reports will be withheld for any student who owes tuition and fees to The University.

CHANGE OF GRADES

Grade changes from "Incomplete" ("IN") to a letter grade must be made within the time limit provision explained under "Explanation of Grade Symbols" in this catalog. A grade of "Incomplete" may be changed by the instructor by completing a Removal of Incomplete form and filing it with the Registrar's Office no later than the end of the final exam period, one year from the semester the incomplete was received. Grade changes from "Postponement of Final Examination" ("EP") to a letter grade should be made within 30 days after the student has taken the authorized postponed final examination. As explained under "Postponement of Final Examination Procedures" in this catalog, if a postponed final examination is not taken before the end of the fall or spring term following the one for which it was approved, the grade in the course is changed by the Registrar's Office to "F." Prior to that time the instructor may change the "EP" to another letter grade by completing a Change of Grade form and filing it with the Registrar's Office.

Any other change of grade must be initiated by the instructor on the required form available in the Registrar's Office and in the Offices of the College Deans. All requests for a change of grade should be accompanied by a statement explaining the requested change. It is the policy to change a grade (other than "Incomplete") only in the case of error. Additional work performed by a student may not be used to raise a grade that has been reported to the Registrar's Office. Requests for a change of grade require the approval of the Dean and the Director of the Division in which the course is offered before the Registrar will make the change on the student's record.

GRADE GRIEVANCE PROCEDURE

In attempting to resolve any student grievance regarding grades or evaluations, it is the obligation of the student first to make a serious effort to resolve the matter with the faculty member with whom the grievance originated. Individual faculty members retain primary responsibility for assigning grades and evaluations. The faculty member's judgment is final unless compelling evidence shows discrimination, differential treatment, or factual mistake. If evidence warrants appeal, then normal academic channels are: Division Director, Dean, Vice President for Academic Affairs, and President.

Grade appeals above the level of the Dean must be submitted in writing on the "Student Academic Grievance Form for Appeal of a Grade" which is available in the Office of the Division Director.

CLASS PARTICIPATION POLICY

Regular attendance at and participation in all meetings of courses for which a student is registered is expected. It is the instructor's responsibility to set and to communicate to students the participation requirements for each course. The degree to which classroom participation is required and whether or not work missed by a student during an absence may be made up is at the discretion of the instructor, subject to the policies on class absences related to observance of religious holy days stated below.

When, in the judgment of the instructor, a student has been absent excessively, the instructor may report the absences to the Dean of the College in which the course is offered and recommend that the student be dropped from the course with a grade of "F." If the Dean approves the recommendation, he advises the Registrar, who in turn advises the instructor and student of the action taken.

A student who enrolls for a course and then does not attend is considered absent from class until he/she officially drops the course or until he/she has accumulated an excessive number of absences and is dropped from the class with a grade of "F."

Instructors shall allow a student who is absent from classes for the observance of a religious holy day to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence. A student who is absent from class for the observance of a religious holy day (means a holy day observed by a religion whose places of worship are exempt from property taxation under Section 11.20, Tax Code) shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence if, not later than the 15th day after the first day of the semester, the student notifies the instructor of each class the student had scheduled on that date that the student would be absent for a religious holy day. Notifications of planned absences must be in writing and must be delivered by the student either (a) personally to the instructor of each class, with receipt of the notification acknowledged and dated by the instructor, or (b) by certified mail, return receipt requested, addressed to the instructor of each class.

REPEATING COURSES

Only those courses in the catalog in which the course description specifically indicates "may be repeated for credit" may be repeated with both the units and grade points earned being counted. An undergraduate student may, however, repeat a course in which he/she received a grade of "D," "F," or "NC" in order to improve his/her grade but cannot receive credit for the course more than once.

If a student re-enrolls in a course in which a "D" has been received, only the highest grade earned is used in calculating the grade-point average. If another "D" or a lower grade is received the second time, the repeated course grade is not used in computing the cumulative UT San Antonio grade-point average, and the course is marked as "Duplication" on the student's official records.

Re-enrollment in a course in which an "F" has been received cancels the credit hours charged against the student's UT San Antonio grade-point average if a higher grade is earned. If a second "F" is received, it is not charged against the student's grade-point average and is marked as "Duplication" on the student's official record.

A student may not repeat a course by correspondence, extension, or through work at another college or university for the purpose of raising his/her grade-point average at UTSA once the course has already been completed at UTSA.

Only undergraduate students may repeat courses for the purpose of raising the grade-point average, as described above.

POSTPONEMENT OF FINAL EXAMINATION PROCEDURES

A student who is compelled to be absent from a final examination because of illness or other imperative reason should petition his/her academic Dean for permission to postpone the examination. This request, which requires prior approval by the instructor, should be made to the Dean as soon as the student knows he/she will be compelled to be absent.

The instructor records the symbol "EP" on the final grade report for a student who has been permitted to postpone an examination.

The examination should be given as soon as possible (preferably during the same examination period), but not later than thirty days after the original examination period. If for good reason the student cannot take the examination within the thirty-day period, the examination may be scheduled at any time convenient to the instructor, except that in no case will it be given later than the end of the fall or spring term following the one for which the postponed examination was approved. If a postponed examination is not taken before the end of the next fall or spring term, the grade in the course will be changed to "F."

HONOR ROLL AND DEAN'S LIST

Undergraduate students who achieve scholastic distinction in a semester, as evidenced by a grade-point average of 3.50 or higher in at least 12 hours of credit, excluding grades of "CR," and receive no grades of "D," "F," "EP," "IN," or "NC" are included on the Honor Roll. Undergraduate students who complete at least 12 semester hours, excluding grades of "CR," and receive no grades of "D," "F," "EP," "IN," or "NC" and who achieve a grade-point average of 3.75 or higher for any semester are included on the Dean's List. Neither the Honor Roll nor the Dean's List are prepared for the summer terms. To determine eligibility for graduation with honors, see Graduation with Honors.

ACADEMIC STANDING

Students are expected to maintain a level of scholastic achievement that would allow them to meet the grade requirements for graduation. Students who fail to maintain the minimum required grade-point average of 2.0 in all work attempted at UT San Antonio will be placed on academic probation or on academic dismissal as appropriate.

ACADEMIC PROBATION

Students whose cumulative UTSA grade-point average falls below 2.0 are placed on Academic Probation. These students will remain on Academic Probation as long as their cumulative UTSA grade-point average remains below 2.0 provided that they achieve AT LEAST a 2.0 each term. Academic Probation will be cleared when they achieve a 2.0 cumulative grade-point average. Failure to achieve a grade-point average of AT LEAST a 2.0 during any term while on academic probation will result in Academic Dismissal. (Students should be aware that they may not graduate while on Academic Probation.)

ACADEMIC DISMISSAL

Students on Academic Probation who achieve a grade-point average BELOW 2.0 during any term will be placed on Academic Dismissal. Students placed on Academic Dismissal must petition for reinstatement or readmission for future enrollment.

PETITION FOR REINSTATEMENT

1. Students placed on Academic Dismissal for the first time may be reinstated after not attending the UTSA for one long-term semester (Fall or Spring). [A student who is dismissed for the first time at the end of the Spring semester, however, may attend the UTSA first five-week summer session in an attempt to raise his or her grade-point average to a level which would permit reinstatement in the Fall semester only if the student completes the Registration Request Form for Dismissed Students in the Office of Admissions and Registrar

prior to the beginning of Summer classes. These students may not attend institutions other than UTSA for the purpose of raising their UTSA grade-point averages.] Students seeking reinstatement must also file an application for Readmission by the appropriate deadline for admissions and applications shown in the calendar of this catalog. These applications are handled by the Admissions Office according to normal Readmission Application Procedures. Reinstated students must consult with the academic advisors prior to registration.

2. Students placed on Academic Dismissal for a second or subsequent time may petition for reinstatement to the Dean of the College in which they are majoring or intend to major after the student has not attended the UTSA for one calendar year. Petition forms may be obtained at the appropriate Dean's Office.

Undeclared majors petition The University Committee on Probation and Reinstatement. Petition forms may be obtained at and should be returned to the Registrar's Office.

Petitions for reinstatement must be filed with the appropriate office by October 15 for reinstatement to the Spring semester by March 15 for reinstatement to the Summer sessions, and by June 15 for reinstatement to the Fall semester.

If the Petition for Reinstatement is disapproved, a student may not file another petition until the following semester.

Appeal of a denial for reinstatement shall be made to the Office of the Vice President for Academic Affairs within two weeks after notice of the denial is mailed by the Registrar's Office. The decision of the Vice President for Academic Affairs is final.

SCHOLASTIC DISHONESTY

The integrity of a university degree depends on the integrity of the work done for that degree by each student. The University expects a student to maintain a high standard of individual honor in his/her scholastic work. (Regent's *Rules and Regulations*, Chapter VI, 3. (17)

"Scholastic dishonesty" includes, but is not limited to, cheating on a test or other class work, plagiarism (the appropriation of another's work and the unacknowledged incorporation of that work in one's own written work offered for credit), and collusion (the unauthorized collaboration with another person in preparing course work offered for credit).

Should a student be accused of scholastic dishonesty, the faculty member may initiate disciplinary proceedings through the Division Director, the Dean of the College, and the Dean of Students. The Dean of the College in which the student is enrolled may initiate formal disciplinary proceedings.

CANCELLATION OF ENROLLMENT

Any student who fails to fulfill admission, registration, or financial requirements or who otherwise fails to adhere to academic regulations is subject to having his/her enrollment for that term cancelled. Application for re-admission to a subsequent term may be considered, provided the deficiency which resulted in the cancellation has been removed.

TRANSCRIPTS

Official transcripts of all course work taken at The University of Texas at San Antonio are available in the Registrar's Office. Requests for transcripts must be in writing and must

bear the signature of the student whose record is requested. A fee is charged for each copy of the transcripts and must be paid in advance. Transcripts from other institutions submitted to UT San Antonio become the property of The University and are not reproduced and/or mailed to other institutions, agencies, or individuals as an official transcript. Requests for unofficial copies of transcripts from other institutions may be made in accordance with the open record laws by filling out the required forms in the Registrar's Office and paying the fee.

Request for official transcript service will not be honored from students who have a financial obligation or other commitment outstanding to The University until the obligation is cleared.

RELEASE OF TRANSCRIPTS AND ACADEMIC RECORDS

UT San Antonio transcripts and other information from a student's academic records are released by the Registrar only upon written request from the student or other person authorized by law under the Family Educational Rights and Privacy Act of 1974 and when payment of the appropriate fee is made. Exceptions may be made in response to a subpoena or court order, under other circumstances as allowed under the Family Educational Rights and Privacy Act of 1974, and as provided in the policy on releasing directory information set forth in this catalog.

All official certification with regard to the academic performance or status of a student or former student of The University of Texas at San Antonio are made by the Registrar's Office.

CHANGE OF NAME

A student's name on official records at UT San Antonio is the name under which the student applied for admission, unless a Change of Name form has been processed through the Registrar's Office. The official university transcript will carry the current name and the most immediate previous name, if any. Name change requests should be supported by appropriate legal documentation, except that upon marriage a student may declare the newly taken name.

CHANGE OF ADDRESS

Currently enrolled students who have changed their addresses should notify the Registrar's Office by completing the appropriate form. Official notification of change of address is necessary for proper identification of students' records and for accurate mailing of correspondence, grade reports, transcripts, registration instructions, and information pertaining to graduation requirements. Students who have a degree application on file in the Registrar's Office should specify if the address change also affects the address to which the diploma is to be mailed.

VII. BACHELOR'S DEGREE REGULATIONS

DEGREE REQUIREMENTS

In order to receive a bachelor's degree from UT San Antonio, a student must comply with the following minimum requirements.

1. Complete a minimum of 120 semester hours of credit, of which at least 39 must be in upper-division work.
2. Complete the university-wide general education requirements. (See immediately below.)
3. Complete the major and support-work requirements and the free elective requirements for the desired degree. Free electives, as used in this catalog are any semester hours of credit accepted by UT San Antonio in transfer or awarded by UT San Antonio which, for degree purposes, are not applied to general education, major, or support-work requirements. The only restrictions placed upon courses used as free electives are:
 - a) that a specified number of free elective credits must be at the upper-division level for some degree programs;
 - b) that a maximum of six hours of physical activities courses can be applied to the free electives allowed for any UT San Antonio degree program; and
 - c) that a maximum of nine hours of military science credit can be applied to the free electives allowed for any UT San Antonio degree program.
4. Meet the residence requirements.
5. Achieve an overall 2.0 grade-point average in all work attempted at UT San Antonio, a 2.0 grade-point average in all work included in the major, and a cumulative 2.0 grade-point average (including all transfer work).
6. Be in good academic standing at UT San Antonio.
7. Apply formally for the degree before the deadline in the Registrar's Office and pay the required fee.

GENERAL EDUCATION REQUIREMENTS

Education develops the ability to think logically, to extract the essence of an idea from the obscure details, to deal with abstractions, to apply theory in practical situations, to think across disciplines, and to recognize common threads which unify different subjects. Education includes historical consciousness: a framework upon which to develop an understanding of other cultures and other points of view. Education enhances an individual's appreciation of the arts and the other accomplishments of civilization.

The educated person is literate beyond literacy, can speak capably, and can write clearly. In a world which is molded by technology, the educated person must have an understanding of mathematics, of scientific methods and experimentation, and of economics and politics. As social problems become increasingly complex, the educated person must have ethics and values which have been strengthened and tested on the force of critical thought.

Education is a life-long endeavor. It does not begin with admission to The University, nor is it packaged and delivered with the presentation of a diploma. Rather, The University serves as catalyst in the development and education of its students. The curriculum of The University is molded around a core of general requirements which is designed to expose students to the essential elements of an education. Beyond this core, the student must satisfy the requirements of a particular major. The University encourages its students to make course selections within these requirements carefully and thoughtfully. Students should not take a narrow view of their curricula, rather they should seek in their elective choices to prepare for a life-long continuation of their education.

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- HIS 3443 Hispanics in the United States
- HIS 3473 History of Women in the United States
- HIS 3813 American Political History
- HIS 3823 History of American Foreign Policy
- HIS 4123 History of Science and Technology in America

Applies to the legislative requirement for Texas history

HIS 2053 History of Texas since 1836

HIS 3123 History of Texas: The Colonial and Mexican Periods and the War of Independence

7. Cultural and Social Sciences 3 hours

Three (3) hours from the following: Anthropology, Bicultural-Bilingual Studies, Criminal Justice, Geography, Non-U.S. History, Linguistics, Non-U.S. Political Science, Psychology, or Sociology.

8. Literary Studies 3 hours

Three (3) hours in literature from the following: American Studies, English, Classics, Humanities, Philosophy (except Logic), French, German, Spanish, Russian, or Comparative Studies in the Humanities.

9. Mathematics/Statistics 3 hours

Three (3) hours at the level of MAT 1013 or above

10. Political Science 6 hours

The State of Texas stipulates that coursework taken for the Bachelor's degree should include six semester hours of courses treating the United States constitution and the constitution of the State of Texas chosen from the following:

Applies to the legislative requirement in United States government:

POL 1023 The Politics of the American Economy

POL 1053 Introduction to American Politics

POL 1083 The United States in the World

POL 2023 Civil Liberties in American Law and Practice

POL 3323 Constitutional Law

Applies to the legislative requirement in Texas government:

POL 1133 Introduction to Texas Politics

POL 1173 American State and Local Politics

11. Science 3 hours

AST 1013 Introduction to Astronomy

BIO 1013 Introduction to Life Sciences

BIO 1103 Principles of Biology (concurrent with BIO 1112 Principles of Biology Laboratory)

CHE 1003 General Chemistry for Allied Health Sciences (concurrent with CHE 1111 General Chemistry Laboratory for Allied Health Sciences)

CHE 1103 Introductory Chemistry

GEO 1003 Introduction to Geology

GEO 1023 Earth History

PHY 1013 Introduction to Physical Sciences

PHY 1603 General Physics I

PHY 1904 Technical Physics I

Six (6) hours of other courses in any single Science discipline also will satisfy the requirement.

Total Hours 42

MINIMUM RESIDENCE REQUIREMENTS

The following minimum residence requirements at UT San Antonio are in accordance with requirements established for all institutions in The University of Texas System and are requirements for all bachelor's degrees.

1. A minimum of 30 semester hours of credit at UT San Antonio courses must be completed before a degree can be conferred.
2. Twenty-four of the last thirty semester hours must be completed in residence, with the exception that among the UT System components, a student may, with the approval of the appropriate Dean, transfer additional course work to his/her program at the degree-granting institution.
3. Of the minimum 39 upper-division hours required in all degree programs at UT San Antonio, 18 of these must be earned in UT San Antonio courses.
4. At least six hours of upper-division UT San Antonio coursework in the major must be completed. Additional hours in the major sequence may be required under individual UT San Antonio degree plans.

TRANSFER OF CREDIT

To prevent unnecessary loss of time and credit, prospective transfer students are encouraged to inform themselves as early as possible of UT San Antonio's admission policies and degree requirements in their areas of interest. Students attending community colleges should be guided as well by the core curricula designed and adopted by the Texas Higher Education Coordinating Board to simplify the transfer of credit, copies of which are available through most community college counselors. Questions regarding the transferability of courses should be addressed to the UT San Antonio Admissions Office.

The Texas Higher Education Coordinating Board has approved core curricula in the following areas: Arts and Sciences (including Mathematics and Natural Sciences), Business Administration, Engineering, Art, and Criminal Justice. Although the courses taken in these core curricula at various institutions may not be precisely equivalent to courses in the UT San Antonio Undergraduate Catalog, students who have successfully completed these core curricula at other institutions are given full credit toward the appropriate degree at UT San Antonio.

Undergraduate college credits completed at other institutions are evaluated for transfer to UT San Antonio by the office of Admissions and Registrar on the basis of UT San Antonio equivalency tables and according to the following guidelines:

1. All work transferred must be from college or university accredited by a regional accrediting association (credits completed at foreign institutions are evaluated on an individual basis).
2. Any academic course from an accredited college or university in which a passing grade has been earned is accepted for transfer credit if it meets all other criteria of this section. Only those hours which apply toward a specific baccalaureate degree program count toward minimum degree requirements.
3. The applicability of particular courses completed at other institutions toward specific course requirements for a baccalaureate degree at UT San Antonio depends upon equivalency of such courses to courses offered by UT San Antonio. Other academic courses are transferred as electives; credit for these courses count toward minimum degree requirements only if they satisfy requirements of the student's degree program. Credit is not given for duplication or repetition of courses.

4. When a course has been repeated for credit only those courses where a grade of D or F was originally earned will be used in the acceptance of credit.
5. Credits for courses such as remedial courses, orientation, life experience, high school level courses, mathematics below the college algebra level, or vocational-technical courses are not accepted for transfer credit. Where vocational-technical courses support a student's degree program, free elective credit may be approved by the Dean of the College in which the student is majoring upon the written request of the student. No transfer credit is granted for the General Education Development Tests.
6. Credit by examination awarded at another accredited college or university is transferred as though the student has completed the course(s) or general subject area(s) at the other institution and is equivalent the same as any other course(s) at that institution. Such credit is subject to all other provisions of this section.
7. Credit earned through accredited colleges and universities for college level academic courses by extension or correspondence (including USAFI or DANTES courses) is evaluated and accepted for transfer if equivalent to UT San Antonio courses, if applicable to the student's degree program, and if all other transfer provisions of this section are met. However, the maximum credit accepted through a combination of extension and correspondence courses is 30 hours (18-hour maximum by correspondence, including USAFI or DANTES). No more than 6 hours of correspondence credit may be applied to the major.
8. Transfer credit for junior college work may not exceed 66 semester hours. Students who have completed more than 66 acceptable semester hours may apply completed, transferable courses to specific course requirements and thereby not have to repeat the courses. The semester hours for those additional courses may not be applied toward the minimum semester hour requirements for a baccalaureate degree.

No upper-division credit may be earned at a junior college. All course requirements at UT San Antonio which are designated as upper-division may be transferred to UT San Antonio only from senior-level institutions.

For credit to be transferred as an upper-division course, the institution where credit was earned must be an accredited senior-level institution and the course must be described in the institution's catalog as being of upper-division level.

If the equivalent of a *required* upper-division UT San Antonio course is completed at an accredited institution as a lower-division course, the course need not be repeated, but another upper-division course, as approved by the student's Advisor, must be completed at UT San Antonio in substitution.

9. Transfer credit for military service training school courses is not granted by UT San Antonio. A student having taken such courses may challenge by examination those UT San Antonio courses which appear equivalent to those already completed. (See the paragraph on UT San Antonio Challenge Examinations in the Credit by Examination section of this catalog.) Credit for ROTC or military science, when awarded by another accredited college or university, will be accepted by UT San Antonio as free elective credit within the limitations of the student's degree program (a maximum of 9 semester hours).¹
10. Credits earned for physical activities courses can be transferred, within the provisions of this section, as free elective credit subject to a maximum of 6 semester hours.

11. Credits earned in colleges and universities which are candidates for accreditation may be considered for transfer to UT San Antonio on an individual basis and as applicable to the student's degree program.

The University reserves the right to refuse recognition of credit from a non-accredited institution. Any such credit accepted in transfer must be validated by 30 semester hours of course work in residence at UT San Antonio, with a grade-point average of 2.0 or higher in that work.

An official Evaluation of Transfer Credit is supplied to each new student as soon as possible following admission. This evaluation shows the equivalency of courses completed elsewhere to courses at UT San Antonio and their applicability to the student's proposed baccalaureate degree at UT San Antonio.

Students who do not receive transfer credit for specific courses should review the policies for credit by examination, or contact the Office of Admissions and Registrar.

CORRESPONDENCE AND EXTENSION COURSES

The University of Texas at San Antonio does not offer correspondence or extension courses at this time. For UT San Antonio policies on transfer and credit limitations on such courses, see Transfer of Credit and Minimum Residence Requirements in this section of the catalog.

While enrolled at UT San Antonio, students normally are not permitted to transfer to UT San Antonio credit earned through correspondence or extension courses. Exceptions to this rule must be approved by the student's Advisor and Dean, and such courses can be taken only in the event that the student about to graduate cannot obtain the course in residence.

MULTIPLE MAJORS WITHIN THE SAME DEGREE

A student completing a baccalaureate degree at The University of Texas at San Antonio is not restricted in the number of majors he or she may complete for the degree. However, if a student wishes to pursue more than one major, all requirements for a single degree and major, plus the additional requirements for the other major(s) must be completed. In such cases, only one degree is awarded. It is unlikely that a student fulfilling more than one major can complete all requirements within the same number of semester credit hours required for a single major.

ADDITIONAL BACCALAUREATE DEGREES

A student holding a baccalaureate degree from The University of Texas at San Antonio or from another accredited institution may receive an additional bachelor's degree in a different major from UT San Antonio. Such a student continues to be classified as an undergraduate and must:

1. Complete a minimum of 30 semester hours of credit in UT San Antonio courses (of which at least 12 must be at the upper-division level in the major field) for each baccalaureate degree sought beyond the first.
2. Complete all requirements for the additional major(s), as set forth in this catalog.
3. Complete all requirements for the additional degree(s), including grade-point average requirements, general education requirements, support courses, elective courses, and upper-division courses, as set forth in this catalog.

¹See Degree Requirements in this section of the catalog and the Army ROTC Program which contains specific information on the maximum number of hours of military science that can be counted as free electives for the various degrees available at UT San Antonio.

4. Complete requirements under the catalog in effect at time of beginning the second degree.

BACCALAUREATE DEGREES COMPLETED CONCURRENTLY

Students pursuing two different degrees at the same time will be required to follow specific catalog requirements for each major, with only General Education Requirements being used jointly.

ENROLLMENT IN GRADUATE COURSES FOR UNDERGRADUATE CREDIT

With approval of the student's advisor, the instructor, the Division Director and the Dean of the College in which the course is offered, and the Vice President for Academic Affairs, an exceptional undergraduate student may enroll in a graduate course and apply the credit earned to his/her undergraduate degree. An approval form is available at the Registrar's Office.

ENROLLMENT IN GRADUATE COURSES FOR GRADUATE CREDIT

An undergraduate student lacking no more than 12 semester hours for graduation may enroll in a graduate course and earn graduate credit under the following conditions:

1. All hours required for the degree must be completed in the term in which he/she is taking the additional course(s) for graduate credit.
2. Permission, on an approved form available at the Registrar's Office, must be obtained from the student's Advisor, and the Dean of the College in which the course(s) to be taken for credit is (are) offered. The approved form must be filed with the Registrar's Office by the end of the add/drop period of the term in which the registration is being made.
3. In order to earn graduate credit, the student must graduate at the end of that term; otherwise, the course(s) is (are) regarded as undergraduate credit. If graduate credit is earned, the semester hours are not considered part of the baccalaureate degree program.
4. Students are encouraged to begin seeking appropriate authorizations prior to the registration period.

CATALOG OF GRADUATION

Students have seven years from the term of original registration to complete a degree program under the catalog of initial registration at UTSA. If a student drops out for one or more long semesters and returns to UTSA as a former student, he/she may choose a subsequent catalog under which to complete his/her graduation requirements (providing the student took at least one course under the catalog), thereby beginning a new seven year time limit. Students who graduate under one catalog and begin a second degree, must begin the new degree under the catalog in effect at that time.

APPLICATION FOR THE DEGREE

It is the student's responsibility to apply for his/her degree at the Office of Admissions and Registrar as soon as possible after completion of 90 semester hours of earned credit. The Office of Admissions and Registrar is responsible for preparing a degree check for The University to see that uniform requirements for each degree are met. The degree check is not intended to be used as a substitute for academic advisement. Students seeking information about remaining degree requirements should consult

with their academic advisor both before and after the preparation of a degree check. The final degree check by The Office of Admissions and Registrar will be issued during the students final semester before graduation.

A degree candidate waiting until the final semester of enrollment to apply for graduation must do so no later than October 1 for the Fall Semester; February 1 for the Spring Semester; July 1 for the Summer Session. The application of any student applying for graduation after the established deadlines for that semester will be processed for graduation for the following semester. Students who apply for the degree in a given term but who do not fulfill all requirements must file a new degree application (before the deadline) for the next term in which they intend to graduate. An additional application fee is required for the second and all subsequent degree applications.

GRADUATION WITH HONORS

Undergraduate students who complete degree requirements for a baccalaureate degree and who have earned an overall grade-point average of 3.50 in all academic college work attempted and have earned a grade-point average of 3.50 in all semester hours attempted at The University of Texas at San Antonio are eligible for graduation Magna Cum Laude. Those who have earned a grade-point average of 3.75 on an overall basis and at UT San Antonio are eligible for graduation Summa Cum Laude.

Candidates who have completed some portion of the requirements for the baccalaureate degree at other collegiate institutions may be graduated with honors when they meet the requirements listed above in addition to completing a minimum of 45 semester hours of credit at The University of Texas at San Antonio, excluding courses challenged by examination or taken on a Credit-No Credit basis in which only the symbol "CR" is recorded.

No degree candidate shall be eligible for graduation with honors if, at the time of graduation, disciplinary action has been taken against the student by The University.

GRADUATION DATES

Degrees are conferred at the end of each semester and at the end of the summer session. Public commencement ceremonies are held only at the conclusion of the spring semester. Students who wish to participate in commencement ceremonies at the close of the spring semester and who have graduated during the previous summer or fall terms may do so. Information on the procedures to be followed is available in the Registrar's Office.

Students may not participate in ceremonies prior to their actual date of graduation.

VIII. SUMMARY OF UNDERGRADUATE DEGREE PROGRAMS

SUMMARY OF UNDERGRADUATE DEGREE PROGRAMS

The following undergraduate degree programs are available.¹ Detailed requirements for each degree are found in Section IX of the present catalog.

Bachelor of Business Administration (BBA)

Accounting

Economics

Finance

Information Systems

Management

Concentrations: (1) Building/Development
(2) Business Management

Management Science

Marketing

Personnel/Human Resource Management

Bachelor of Arts (BA)

American Studies

Anthropology

Criminal Justice

Early Childhood and Elementary Education²

Economics

English

French

Geography

German

History

Humanities

Political Science

Psychology

Sociology

Spanish

Bachelor of Fine Arts (BFA)

Art and Design

Concentrations: (1) Art
(2) Architectural Design
(3) Interior Design

Bachelor of Music (BM)

Bachelor of Music Education (BME)

¹Course offerings in undergraduate degree programs may be postponed if enrollments or resource and space limitations do not warrant scheduling or continuation of a particular course.

²Effective Fall 1989 the Bachelor of Arts Degree in Elementary Education will be an interdisciplinary degree. Contact the Division of Education for degree requirements contained in an addendum to this catalog.

Bachelor of Science (BS)

Biology

Chemistry

Civil Engineering

Computer Science

Concentrations: (1) Software Option
(2) Hardware Option

Electrical Engineering

Geology

Health Education

Mathematics

Concentrations: (1) Mathematics
(2) Statistics
(3) Mathematics Education

Mechanical Engineering

Medical Technology

Occupational Therapy

Physical Education

Physical Therapy

Physics

IX. UNDERGRADUATE DEGREE PROGRAMS AND COURSE DESCRIPTIONS

COLLEGE OF BUSINESS

All undergraduate degrees in the College of Business are accredited by the American Assembly of Collegiate Schools of Business and conform to its recommended guidelines.

Students in the College of Business may not enroll in 3000 and 4000 level courses in the College of Business before declaring a major.

Students majoring in fields outside the College of Business may not take more than 27 semester hours in this College without approval of the Dean of the College of Business.

Declaration of a major in the College of Business is limited to those students who meet the following minimum requirements:

1. Completion of 45 semester credit hours.
2. Cumulative grade point average of 2.50 in all course work.
3. Completion of the following eight core courses or their equivalents with a grade point average of 2.25:

ACC 2013 Accounting Principles I
 ACC 2033 Accounting Principles II
 ECO 2013 Introductory Macroeconomics
 ECO 2023 Introductory Microeconomics
 MAT 1033 Algebra with Calculus for Business
 STA 1063 Statistics for Business and Economics
 CS 1043 Computer Programming for Business
 COM 1043 Introduction to Communications

All students seeking an undergraduate degree in the College of Business must complete the 42 semester credit hours of General Education Requirements.

Students seeking a BBA degree must take the following courses to meet general education requirements: ENG 1013 Freshman Composition, ENG 1023 Critical Reading and Writing, MAT 1033 Algebra with Calculus for Business, CS 1043 Computer Programming for Business, PHI 2053 Business Ethics.

Students with a concentration in Building/Development will complete PHY 1603 General Physics I to meet the science requirement and MAT 1214 Calculus I as part of their General Education Requirements.

All students seeking a Bachelor of Business Administration degree in the College of Business must complete the following 45 semester credit hours of Common Body of Knowledge (CBK) courses:

Course or Requirement	Semester Credit Hours
STA 1063 Basic Statistics for Business and Economics	3
COM 1043 Introduction to Communication ¹	3
ACC 2013 Accounting Principles I	3
ACC 2033 Accounting Principles II	3
BLW 3013 Business Law	3
ECO 2013 Introductory Macroeconomics	3
ECO 2023 Introductory Microeconomics	3
ECO 3033 Economics of the Firm ²	3
FIN 3013 The Finance Function	3
IS 3003 Principles of Information Systems for Management	3

¹COM 1043 is not required for Building/Development majors.

²Economics majors seeking a Bachelor of Business Administration degree must substitute ECO 3013 Theory of Price for ECO 3033 Economics of the Firm.

MGT 3013	Introduction to Organization Theory, Behavior, and Management	3
MGT 3033	Quantitative Decision Analysis and Production	3
MGT 3043	Business Communications	3
MGT 4893	Business Policies and Management	3
MKT 3013	Principles of Marketing	3

DIVISION OF ACCOUNTING AND INFORMATION SYSTEMS

BACHELOR OF BUSINESS ADMINISTRATION DEGREE IN ACCOUNTING

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 126.

In addition to the General Education Requirements and requirements from the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete 39 additional semester hours.

All candidates for the degree must complete:

- A. 27 upper division semester hours in Accounting and Information Systems in addition to the 9 hours of CBK:
 1. 21 semester hours of required courses are:
 - ACC 3023 Intermediate Financial Accounting I
 - ACC 3033 Intermediate Financial Accounting II
 - ACC 3043 Federal Income Tax Accounting
 - ACC 4013 Principles of Auditing
 - ACC 4023 Cost Analysis
 - ACC 4153 Corporate and Partnership Taxation
 - IS 3013 Accounting Information Systems
 2. 6 additional semester hours are required in Accounting, as approved by the student's advisor.
- B. 12 semester hours to be taken as follows:
 - BLW 3023 Business Organizations and Commercial Law
 - 3 semester hours of free electives
 - 6 semester hours of electives which must be taken outside the College of Business.

COURSE DESCRIPTIONS ACCOUNTING (ACC)

2013 Accounting Principles I

(3-0) 3 hours credit. Prerequisite: MAT 1033 or consent of Division Director.
An introduction to the basic concepts of financial accounting. A course to provide coverage of the fundamental aspects of the accounting discipline by focusing on significant financial issues.

2033 Accounting Principles II

(3-0) 3 hours credit. Prerequisite: ACC 2013.
A study of basic financial accounting and management's use of accounting to provide information for planning and controlling routine operations, long-range planning, inventory valuation and nonroutine decision making.

2043 Introduction to Accounting Topics

(3-0) 3 hours credit. Prerequisite: ACC 2033.
An introduction to more advanced accounting topics such as federal taxation and cost accounting. May not be applied to a major in Accounting or Information Systems. Credit cannot be earned for both ACC 2043 and ACC 3003.

- 3023 Intermediate Financial Accounting I**
(3-0) 3 hours credit. Prerequisite: ACC 2013 and 2033.
A study of accounting theory and concepts. Analysis of the special problems which arise in applying these concepts to financial accounting and reporting.
- 3033 Intermediate Financial Accounting II**
(3-0) 3 hours credit. Prerequisite: A grade of C or better in ACC 3023.
A study of accounting theory and concepts, with special focus on accounting for corporations, bonds, leases and pensions.
- 3043 Federal Income Tax Accounting**
(3-0) 3 hours credit. Prerequisite: A grade of C or better in ACC 3023.
Fundamentals of federal income tax accounting, with emphasis on individual income tax; income inclusions and exclusions; and statutory deductions in computing tax liability.
- 4013 Principles of Auditing**
(3-0) 3 hours credit. Prerequisites: A grade of C or better in both ACC 3033 and IS 3013.
A study of auditing theory, professional ethics, audit programs, evidential matter and professional reports.
- 4023 Cost Analysis**
(3-0) 3 hours credit. Prerequisite: ACC 2033.
A study of advanced cost accounting systems, including cost allocation, unit cost determination, variance analysis, capital budgeting, inventory control, and other related quantitative methods.
- 4033 Advanced Financial Accounting Topics**
(3-0) 3 hours credit. Prerequisite: A grade of C or better in ACC 3033.
A study of advanced topics such as business combinations and consolidations, partnerships, and foreign currency translation.
- 4043 International Accounting**
(3-0) 3 hours credit. Prerequisite: ACC 3033.
A study of the accounting issues and problems of multi-national corporations, including FAS52, and international accounting standard-setting.
- 4053 Accounting for Governmental and Not-for-Profit Organizations**
(3-0) 3 hours credit. Prerequisite: ACC 3033 or consent of instructor.
A study of accounting, budgeting, fiscal procedures and financial records of governmental agencies and private not-for-profit organizations.
- 4083 Budgeting, Planning and Forecasting**
(3-0) 3 hours credit. Prerequisite: ACC 4023 or equivalent.
A study of advanced cost accounting topics (managerial, behavioral and quantitative) for profit planning and control. Specific forecasting models and computer applications are addressed.
- 4113 Analysis of Financial Statements**
(3-0) 3 hours credit. Prerequisite: ACC 3033.
The theoretical foundations of financial statements and a study of the techniques for analyzing them.
- 4153 Corporate and Partnership Taxation**
(3-0) 3 hours credit. Prerequisites: A grade of C or better in both ACC 3033 and ACC 3043.
Taxation of corporate and partnership earnings and distributions. Includes corporate reorganizations, liquidations, personal holding companies, collapsible corporations and Subchapter S.
- 4173 Estate and Gift Taxation**
(3-0) 3 hours credit. Prerequisite: ACC 3043 or consent of instructor.
Introduction to the federal estate and gift tax laws with an emphasis on the applicable code sections and regulations.
- 4183 EDP Auditing and Advanced Problems**
(3-0) 3 hours credit. Prerequisite: ACC 4013.
An in-depth analysis of the Statements of Auditing Standards with special emphasis on evaluating internal control in an EDP environment and computer assisted auditing.

Bachelor of Business Administration Degree in Information Systems

4213 Tax Research Methods

(3-0) 3 hours credit. Prerequisite: ACC 4153.

A study of tax research methods and materials and the history of the Internal Revenue Code, collection and appeals procedures in the Internal Revenue Service.

4223 Oil and Gas Accounting

(3-0) 3 hours credit. Prerequisite: 12 hours of accounting or consent of instructor.

A study of the critical aspects of the petroleum industry and related accounting problems. Topics include industry structure, development, production, transportation and refining with associated accounting issues.

4293 Seminar in Accounting Theory

(3-0) 3 hours credit. Prerequisite: 24 hours of accounting or consent of instructor.

A study of current accounting pronouncements and literature; accounting bulletins of the American Institute of Certified Public Accountants, Securities and Exchange Commission Accounting Series Releases and Statements from the Financial Accounting Standards Board.

4911-3 Independent Study

1-3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student's advisor, Division Director and Dean.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4933 Internship in Accounting

3 hours credit. Prerequisites: ACC 3033, an overall 3.0 grade point average, and permission in writing (form available) of the instructor, the student's advisor, Division Director and Dean.

The opportunity to gain knowledge through experiential activities in professional life. Joint cooperation with business and governmental institutions in structuring and monitoring work experience aimed at supplementing the classroom learning process. Internships may be repeated twice (a total of 6 hours) provided the Internships are with different organizations.

4953 Special Studies in Accounting

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours within any one discipline will apply to a bachelor's degree.

**BACHELOR OF BUSINESS ADMINISTRATION
DEGREE IN INFORMATION SYSTEMS**

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 126.

In addition to the General Education Requirements and requirements from the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete 39 additional semester hours.

All candidates for the degree must complete:

A. 27 semester hours in Accounting and Information Systems in addition to the 9 hours of CBK:

1. 24 semester hours of required courses are:

ACC 3023 Intermediate Financial Accounting I

ACC 4023 Cost Analysis

IS 2033 Introduction to Information Systems

IS 2043 File Processing

IS 3063 Data Structures and Information Retrieval

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Information Systems**

- IS 3073 Business Information Systems
- IS 4053 Analysis and Design of Information Systems
- IS 4063 Advanced Topics in Information Systems

2. 3 additional semester hours of upper-division Information Systems course work.
- B. 12 semester hours to be taken as follows:
- 6 semester hours of free electives.
 - 6 semester hours of electives which must be taken outside the College of Business.

**COURSE DESCRIPTIONS
INFORMATION SYSTEMS
(IS)**

2033 Introduction to Information Systems

(3-0) 3 hours credit. Prerequisite: CS 1043.

Basic elements of structured COBOL programming including logical structures, modular design, and documentation techniques. The development of programs for complex business applications. Credit may not be earned for both BDS 2013 and IS 2033.

2043 File Processing

(3-0) 3 hours credit. Prerequisites: IS 2033, ACC 2013.

Concepts of file organization, design, and maintenance. Emphasis on business applications which utilize sequential, indexed-sequential, or direct access files. Other advanced concepts such as report generation, character manipulation, and variable length records may also be covered. Credit may not be earned for both BDS 2023 and IS 2043.

3003 Principles of Information Systems for Management

(3-0) 3 hours credit. Prerequisites: ACC 2033, CS 1043.

Examines the role of information in organizational management and the conceptual framework for the development of a management information system. Particular emphasis is placed on the planning, analysis, design, implementation, and evaluation phases of MIS development.

3013 Accounting Information Systems I

(3-0) 3 hours credit. Prerequisites: ACC 2033 and CS 1043 or their equivalents.

Examines the role of accounting information systems within the organizational structure. A conceptual framework for integrating elements required to support accounting information systems. Credit may not be earned for both BDS 3013 and IS 3013. May not be applied for credit in the IS concentration.

3023 Accounting Information Systems II

(3-0) 3 hours credit. Prerequisite: IS 3013.

A study of the role of accounting information systems in the business world. Emphasis is on hands-on experience with various application systems on the microcomputer. May not be applied for credit in the IS major.

3063 Data Structures and Information Retrieval

(3-0) 3 hours credit. Prerequisites: IS 2043 or BDS 2023, and ACC 2033.

Techniques of designing and implementing data management systems including data structures, file organization, file maintenance, data retrieval, and selection of commercial systems. Credit may not be earned for both BDS 3063 and IS 3063.

3073 Business Information Systems

(3-0) 3 hours credit. Prerequisites: IS 2043 or BDS 2023 and ACC 2033 or consent of instructor.

Use of computers in the small business environment. Emphasis on programming, applications and management of minicomputers. Students will use typical small business computers in a hands-on, office environment for programming software applications. Credit may not be earned for both BDS 3073 and IS 3073.

4053 Analysis and Design of Information Systems

(3-0) 3 hours credit. Prerequisites: IS 3063 or BDS 3063, and ACC 2033.

Tools and techniques of applications systems analysis. Case studies emphasizing problem definition, feasibility studies, analysis, design, development, documentation and implementation of business data systems. Credit may not be earned for both BDS 4053 and IS 4053.

4063 Advanced Topics in Information Systems

(3-0) 3 hours credit. Prerequisite: 12 hours of IS or BDS or consent of instructor. Ordinarily taken during semester of graduation.

Survey of recent developments in data processing and computer technology. Analysis will focus on applications in the business community and theoretical developments which relate to those applications. Credit may not be earned for both BDS 4063 and IS 4063.

4073 Information Resource Management

(3-0) 3 hours credit. Prerequisite: IS 3063 or BDS 3063.

Study of the problems and techniques involved with the planning, organizing and controlling of data processing resources. Will include project development control, organizing and staffing, hardware control, and costs of data processing services. Credit may not be earned for both BDS 4073 and IS 4073.

4083 EDP Controls and Auditing

(3-0) 3 hours credit. Prerequisites: IS 4053 or BDS 4053, and ACC 2033.

Primary emphasis on the audit of EDP systems, provision and evaluation of controls in systems operation, and the provision and maintenance of computer security.

4093 Decision Support Systems

(3-0) 3 hours credit. Prerequisites: IS 4053 or BDS 4053, and ACC 2033.

An examination of the highest level of information support systems. Emphasis is placed on those systems which assist managers in their decision processes, support managerial judgment, and aid in improving the effectiveness of decision-making.

4911-3 Independent Study

1-3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student's advisor, Division Director and Dean of the college in which the course is taken. Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4933 Internship in Information Systems

3 hours credit. Prerequisites: 9 hours of IS or BDS courses, an overall 3.0 grade point average, and permission in writing (form available) of the instructor, the student's advisor, Division Director and Dean.

The opportunity to gain knowledge through experiential activities in professional life. Joint cooperation with business and governmental institutions in structuring and monitoring work experience aimed at supplementing the classroom learning process. Internships may be repeated twice (a total of 6 hours) provided the Internships are with different organizations.

4953 Special Studies in Information Systems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

DIVISION OF ECONOMICS AND FINANCE

BACHELOR OF BUSINESS ADMINISTRATION DEGREE IN ECONOMICS

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 129.

In addition to the General Education Requirements and requirements from the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete 42 additional semester hours.

- A. 18 upper-division semester hours in the major in addition to the 9 hours of CBK in the major:
 - ECO 3053 Aggregate Economic Analysis
 - ECO 3113 Introduction to Mathematical Economics
 - 12 additional hours of ECO upper-division electives
- B. 24 semester hours of support work
 - 1. ACC 2043 Introduction to Accounting Topics
ACC 3023 Intermediate Financial Accounting I
 - 2. 3 hours of College of Business upper-division electives
 - 3. 9 semester hours of free electives
 - 4. 6 semester hours of electives which must be taken outside the College of Business.

BACHELOR OF ARTS DEGREE IN ECONOMICS

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 126.¹

In addition to the General Education Requirements, all candidates for the degree must complete 84 additional semester hours.

- A. 27 semester hours in the *major*, 21 of which must be at the upper-division level.
 - 1. 15 semester hours of required courses are:
 - ECO 2013 Introductory Macroeconomics
 - ECO 2023 Introductory Microeconomics
 - ECO 3013 Theory of Price
 - ECO 3053 Aggregate Economic Analysis
 - ECO 3113 Introduction to Mathematical Economics
 - 2. 12 additional semester hours are required in economics, as approved by the student's advisor.
- B. 24 semester hours of *support work*.
 - 1. 6 semester hours of ACC 2013 Accounting Principles I and ACC 2033 Accounting Principles II are required.
 - 2. 18 semester hours distributed as follows:
 - 6 additional semester hours in the College of Business;
 - 12 additional semester hours of social science.

¹Thirty-nine of the total semester hours required for the degree must be at the upper-division level.

C. 33 semester hours to be taken as follows:

COM 1043 Introduction to Communication

STA 1063 Basic Statistics for Business and Economics

27 semester hours of free electives, but no more than 9 semester hours of this group may be in additional Economics courses.

COURSE DESCRIPTIONS

ECONOMICS

(ECO)

2003 Introduction to Political Economy

(3-0) 3 hours credit.

A nontechnical introduction to economic analysis and its application to current economic issues such as inflation, unemployment, taxation, economic concentration and power, energy, health and welfare, and international commerce. May not be counted toward a major in economics but may be counted as a free elective for College of Business students.

2013 Introductory Macroeconomics

(3-0) 3 hours credit. Prerequisite: MAT 1033 or consent of Division Director or Dean.

Economic analysis at the national level, including the determination of aggregate income and employment, operation of the monetary system, short-term income fluctuations, long-term income growth, public policy toward business, and problems of international trade and finance.

2023 Introductory Microeconomics

(3-0) 3 hours credit. Prerequisite: MAT 1033 or consent of Division Director or Dean.

The application of economic theory to decision-making by consumers and administrators; demand and cost analysis (including demand forecasts); price policy of the individual firm; production analysis; cost-benefit analysis for the public sector.

3013 Theory of Price

(3-0) 3 hours credit. Prerequisites: ECO 2013, 2023 and MAT 1033, or their equivalents.

Operations of individual markets; market structure; theory of the firm; theory of production; demand theory; general equilibrium and welfare economics.

3033 Economics of the Firm

(3-0) 3 hours credit. Prerequisites: ECO 2013, 2023 and MAT 1033, or their equivalents.

Review and extension of microeconomic analysis with applications in the area of administrative problems; analysis of market systems and firm behavior; examination of public and private decision making and economic issues. May not be counted toward a major in economics.

3053 Aggregate Economic Analysis

(3-0) 3 hours credit. Prerequisites: ECO 2013 and ECO 2023 or their equivalents.

Analysis of the measurement, determination, and control of aggregate economic activity; the monetary system in relation to income and employment; short-term income fluctuations; long-term growth. Credit cannot be earned for both ECO 3053 and ECO 3063.

3113 Introduction to Mathematical Economics

(3-0) 3 hours credit. Prerequisites: ECO 2013 and ECO 2023, and MAT 1033, or their equivalents, or consent of instructor.

Mathematical formulations of economic theory; mathematical treatment of optimizing behavior; applications to consumer and business firm theory; emphasis on understanding of analytical techniques.

3123 Forecasting Techniques in Business and Economics

(3-0) 3 hours credit. Prerequisites: STA 1063 and CS 1043 or their equivalents.

Measurement in economics and business that strives to mix the development of technique with its application to economic analysis. Major topics include the nature of economic and business data, specific forms of modeling and forecasting, and the use of mainframe and microcomputer programs in econometric modeling and forecasting.

3163 Development of Economic Thought

(3-0) 3 hours credit.

Evolution of economic theory and doctrine, contributions to economic thought from ancient times to the present; emphasis on institutional forces shaping the continuum of economic thinking.

3183 Economic Development of the United States

(3-0) 3 hours credit. Prerequisite: ECO 2013 or ECO 2023 or the equivalent.

The growth of the American economy from colonial times to the present; special emphasis on the market forces, institutional arrangements, and policies contributing to this process.

3193 The International Economy

(3-0) 3 hours credit. Prerequisite: ECO 2013 or ECO 2023 or the equivalent, or consent of instructor.

Principles of international trade; significance of geographic, economic, social and political influences; current problems in international trade and payments; tariffs and commercial policy; role of international organizations.

3213 Government Regulation of Industry

(3-0) 3 hours credit. Prerequisite: ECO 2023 or the equivalent, or consent of instructor.

Theory and practice of governmental regulation, deregulation, and privatization; economic, legal, and ethical concerns regarding private sector output and pricing as influenced by public policy and marketing structure.

3253 Economics of Public and Social Issues

(3-0) 3 hours credit. Prerequisite: ECO 2013 or ECO 2023 or the equivalent, or consent of instructor.

A seminar on applying economic reasoning and models to a wide variety of public, ethical, and social issues. Uses advanced techniques in political economy.

3263 Industrial Organization

(3-0) 3 hours credit. Prerequisite: ECO 2023 or the equivalent.

Theory and empirical evidence relating to the structure of American industry and its effect on the firm's conduct and performance, government policy, and regulation.

3273 Public Choice and the Public Finances

(3-0) 3 hours credit. Prerequisites: ECO 2013 and ECO 2023.

Definition of public goods and the application of economic models to the public sector. Analysis of government expenditure policy including various budgeting frameworks and cost-benefit analysis. Investigation of sources of government revenue including taxation and incidence concepts.

3283 Labor Economics

(3-0) 3 hours credit. Prerequisite: ECO 2013 or ECO 2023 or the equivalent, or consent of instructor.

Theories of wages and employment determination; U.S. labor history, comparative labor movements; contemporary labor problems.

4273 Environmental and Resource Economics

(3-0) 3 hours credit. Prerequisite: ECO 2023 or the equivalent.

Economic principles applied to natural resource and environmental problems; relationship of market and non-market forces to environmental quality and demands for natural resources; development of tools for policy analysis.

4283 Economics of Employment and Training

(3-0) 3 hours credit. Prerequisite: ECO 2023 or equivalent.

Economics of human resource development; examination of programs for training and upgrading of workers; barriers to skill development and job entry; formulation of public policies on human resources.

4293 Economics of Discrimination and Poverty

(3-0) 3 hours credit. Prerequisite: ECO 2023 or the equivalent, or consent of instructor.

Economic and non-economic implications of discrimination on the basis of race and sex; discrimination in the labor and commodity markets; problems of educational training, unemployment, and personal income distribution.

4303 Economic Problems of Emerging Nations

(3-0) 3 hours credit. Prerequisite: ECO 2013 or the equivalent, or consent of instructor. Specific economic problems of emerging nations and national groupings; basic approaches to economic development; major proposals for accelerating development; role of planning; trade, aid and economic integration.

4463 Medical and Health Economics

(3-0) 3 hours credit. Prerequisite: ECO 2023 or the equivalent. Economic analysis of medical and health services. Physician and dentist pricing; hospital supply; markets in health-related professions; drug and equipment markets; medical and health insurance; national priorities and policy for health service delivery.

4911-3 Independent Study

1-3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, Division Director and Dean of the College in which the course is taken. Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4933 Internship in Economics

3 hours credit. Prerequisite: 12 hours of upper-division economics and permission in writing (form available) of instructor, the student's advisor, Division Director and Dean. The opportunity for work experience in research or applied economics; may be undertaken either in private business or a public agency; opportunities developed in consultation with faculty Advisor and Division Director and require approval of both. This course will not count toward the twenty-seven hours of required Economics courses. Internships may be repeated twice (a total of 6 hours) provided the Internships are with different organizations.

4953 Special Studies in Economics

3 hours credit. Prerequisite: Consent of instructor. An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

BACHELOR OF BUSINESS ADMINISTRATION DEGREE IN FINANCE

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 129.

In addition to the General Education Requirements and requirements from the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete 42 additional semester hours.

- A. 18 upper-division semester hours in the major in addition to the 3 hours of CBK in the major:
 - FIN 3033 Principles of Investment
 - FIN 3313 Money and Banking
 - 12 additional hours of FIN electives
- B. 24 hours of support work:
 - 1. ACC 3023 Intermediate Financial Accounting I
 - ACC 3033 Intermediate Financial Accounting II
 - ACC 4023 Cost Analysis
 - 2. 3 hours of College of Business upper-division electives.
 - 3. 6 semester hours of free electives
 - 4. 6 semester hours of electives which must be taken outside the College of Business.

COURSE DESCRIPTIONS

FINANCE (FIN)

- 2003 Personal Finance**
(3-0) 3 hours credit.
A nontechnical course examining various aspects of budgeting, banking, real estate, insurance, consumer credit, and retirement plans from the individual's point of view. May not be counted toward a major in finance but may be counted a free elective for College of Business students.
- 3013 The Finance Function**
(3-0) 3 hours credit. Prerequisites: ACC 2013, ACC 2033, and MAT 1033 or their equivalents.
Introduction to analytical financial management with emphasis on the management of the short-term uses and sources of funds; capital investment and management of long-term sources of funds.
- 3023 Corporate Finance**
(3-0) 3 hours credit. Prerequisite: FIN 3013 or the equivalent.
Advanced discussion of subjects essential to corporate financial management, including short-term credit policies, capital budgeting, risk, sources of long-term funds, financial leverage, and the cost of capital. Special topics such as mergers, bankruptcy, and reorganization will also be considered.
- 3033 Principles of Investment**
(3-0) 3 hours credit. Prerequisite: FIN 3013 or the equivalent.
Introduction to securities markets; analysis of securities issued by corporations in various industries by intermediaries, and by federal, state, and municipal governments; investment management in the light of tax considerations, timing, and selected portfolio needs.
- 3313 Money and Banking**
(3-0) 3 hours credit. Prerequisite: ECO 2013 or the equivalent.
Elements of monetary theory; relationships between money, prices, production and employment; factors determining money supply; operation of capital markets with reference to the United States.
- 3403 Cases in Financial Management**
(3-0) 3 hours credit. Prerequisites: FIN 3033 and FIN 3313 or their equivalents.
Advanced analysis of financial cases based on actual business problems and the application of financial theory and technique are used to illustrate the process required to formulate financial decisions.
- 3413 Financial Markets**
(3-0) 3 hours credit. Prerequisite: FIN 3313 or the equivalent.
Analysis of financial management principles, theories, and techniques as they apply to the peculiarities of the financial firm; emphasis on asset and liability management in a changing environment of regulation, competition and financial intermediation.
- 3423 Security Analysis**
(3-0) 3 hours credit. Prerequisite: FIN 3033 or the equivalent.
Advanced financial analysis: examination of statements and supplementary data of industrial, commercial, financial intermediary, and public enterprises; preparation of reports relevant to achieving an understanding of financial management policies.
- 3433 Principles of Real Estate**
(3-0) 3 hours credit.
General introduction to the subject matter and terminology of real estate as a business and profession; federal, state, and local laws governing housing discrimination, equal credit opportunity, and community reinvestment.
- 3503 Real Estate Investment**
(3-0) 3 hours credit. Prerequisites: FIN 3013 and FIN 3433 or their equivalents.
Analysis of real estate investment alternatives; feasibility and site analysis; tax considerations; income and expense analysis; discounted cash flow analysis; profitability measurement; and forms of ownership.

4313 Commercial Bank Management

(3-0) 3 hours credit. Prerequisite: FIN 3313 or the equivalent.

Direction and coordination of the various functions of the commercial bank, including money position, lending, capital management, trust and auxiliary functions.

4403 Capital Structure and Budgeting

(3-0) 3 hours credit. Prerequisite: FIN 3013 or the equivalent.

Application of long-term economic decision analysis to financial planning in both profit and non-profit institutions; development of allocation criteria for sources and uses of scarce financial resources.

4423 Investment Portfolio Management

(3-0) 3 hours credit. Prerequisite: FIN 3033 or the equivalent.

Application of investment principles to management of investment portfolios of individuals and institutions; consideration of business cycles, investment constraints, portfolio construction, investment timing, and securities selection.

4523 Introduction to Risk Management

(3-0) 3 hours credit. Prerequisite: FIN 3013 or consent of instructor.

Analysis of risk management tools as an integral part of corporate financial decisions; alternatives for spreading risk such as insurance, retention funds, and external funds.

4613 Introduction to International Finance

(3-0) 3 hours credit. Prerequisite: FIN 3013 or the equivalent.

Study of underlying forces in international financial relations and the unique problems of international trade, investments, and operations; examination of multi-national business finance and its economic, legal, and political dimensions.

4713 Mortgage Banking and Real Estate Finance

(3-0) 3 hours credit. Prerequisites: FIN 3013 and FIN 3433 or their equivalents.

Planning, structure, and analysis of real estate financing from the viewpoints of both the users and suppliers of funds; examination of various techniques and legal instruments; institutional constraints and their effects on real estate lending activities; federal, state and local laws governing housing discrimination, equal credit opportunity, and community reinvestment.

4813 The Insurance Function

(3-0) 3 hours credit. Prerequisite: FIN 3013 or the equivalent.

Analysis of insurance as a principal method of handling risk; types of insurance and contracts; determinants of premiums and resources; applicable legal principles.

4823 Financing Insurance Operations

(3-0) 3 hours credit. Prerequisite: FIN 3013 or the equivalent.

Organization of insurance enterprises and related businesses; examination of underwriting function and practices; coverage supplied by the individual firm; insurance company investments and their management.

4853 Real Estate Appraisal

(3-0) 3 hours credit. Prerequisites: FIN 3013 and FIN 3433 or equivalents or consent of instructor.

Functions and methods of property valuation including comparable sales analysis, cost-depreciation analysis, and income capitalization; residential and income property appraisal techniques and reporting.

4911-3 Independent Study

1-3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, Division Director and Dean of the College in which the course is offered. Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4933 Internship in Finance

3 hours credit. Prerequisites: 12 hours of upper-division finance courses and permission in writing (form available) of the instructor, the student's advisor, Division Director and Dean.

The opportunity for work experience in research of financial operations, including real estate and insurance; may be undertaken in either private business or a public agency;

opportunities developed in consultation with faculty Advisor and Division Director and requires approval of both. This course will not count toward the twenty-one hours required Finance courses. Internships may be repeated twice (a total of 6 hours) provided the Internships are with different organizations.

4953 Special Studies In Finance

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

COURSE DESCRIPTIONS
BUSINESS LAW
(BLW)

3013 Business Law

(3-0) 3 hours credit. Prerequisite: ECO 2023 or consent of Division Director or Dean.

Origin and development of law, judicial processes, tort law, and an introduction to the legal structure of business organizations. Includes an introductory study of contractual relations, real and personal property business transactions. Based upon a case and lecture approach, the regulatory and public law impacts upon businesses are discussed in light of socio-economic, political, and ethical influences.

3023 Business Organizations and Commercial Law

(3-0) 3 hours credit. Prerequisite: BLW 3013 or the equivalent.

Detailed study of topics under the Uniform Commercial Code: sales, secured transactions, commercial paper and also bankruptcy, suretyship, wills, trusts, estates, securities regulations, accountants' liability, and the legal operation of partnerships and corporations.

3033 Advanced Business Law

(3-0) Prerequisite: BLW 3013 or the equivalent.

Study of government regulations affecting employees and employers; competition; social responsibilities of business to the consuming public and competitors; and international transactions, particularly as affected by social, political, economic, and ethical perspectives.

3523 Real Estate Law

(3-0) 3 hours credit. Prerequisite: BLW 3013 or the equivalent.

Legal environment of real property ownership, transfer and legal brokerage; estates in land, sales contracts; mortgage transactions; title conveyances; landlord and tenant; restrictions and zoning; eminent domain, federal, state, and local laws governing housing discrimination, equal opportunity and community reinvestment.

4911-3 Independent Study

1-3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student's advisor, Division Director, and Dean.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4953 Special Studies In Business Law

3 hours credit. Prerequisite: Consent of Instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours within any one discipline will apply to a bachelor's degree.

DIVISION OF MANAGEMENT AND MARKETING

BACHELOR OF BUSINESS ADMINISTRATION DEGREE IN MANAGEMENT WITH A CONCENTRATION IN BUSINESS MANAGEMENT

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 129.

In addition to the General Education Requirements and requirements from the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete 42 additional semester hours.

- A. 9 upper-division semester hours in the MGT concentration in addition to the 12 hours of CBK courses in the major.
- B. 33 semester hours of support work:
 - 1. ACC 2043 Introduction to Accounting Topics
 - 2. 12 hours of College of Business upper-division electives
 - 3. 18 hours of electives outside the College of Business.

BACHELOR OF BUSINESS ADMINISTRATION DEGREE IN MANAGEMENT SCIENCE

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 129.

In addition to the General Education Requirements and requirements from the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete 42 additional semester hours.

- A. 18 upper-division semester hours in the major in addition to the 3 hours of CBK in the major:
 - MGT 3343 Production Management
 - MGT 4323 Simulation Applications in Business
 - MGT 4333 Management Information Systems9 additional hours of MGT electives
- B. 24 semester hours of support work are:
 - 1. ACC 2043 Introduction to Accounting Topics
 - 2. 6 hours of College of Business upper-division electives
 - 3. 15 hours of electives outside the College of Business.

BACHELOR OF BUSINESS ADMINISTRATION DEGREE IN MANAGEMENT WITH A CONCENTRATION IN BUILDING/DEVELOPMENT

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 129². The degree is offered with joint support of the architecture program. Architecture courses are described under the Division of Art and Design.

In addition to the General Education Requirements and the requirements of the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete 45 additional semester hours.

**Bachelor of Business Administration Degrees / 105
Management**

45 semester hours of support work are:

- ACC 2043 Introduction to Accounting Topics
- ARC 2213 Construction I
- ARC 3413 Architectural Documents I
- ARC 4013 Building Construction Estimating
- ARC 4613 Construction Management
- ARC 3203 Housing and Land Development
- ARC 4113 Project Development
- URB 3723 Urban Planning and Design
- PHY 1623 General Physics II
- BLW 3523 Real Estate Law
- FIN 3433 Principles of Real Estate
- FIN 4713 Mortgage Banking and Real Estate Finance
- FIN 3503 Real Estate Investment

6 additional hours of ARC internship or free electives.

**BACHELOR OF BUSINESS ADMINISTRATION DEGREE IN
PERSONNEL/HUMAN RESOURCE MANAGEMENT**

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 129.

In addition to the General Education Requirements and requirements from the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete 42 additional semester hours.

- A. 18 upper-division semester hours in the major in addition to the 3 hours of CBK in the major:

- MGT 3613 Personnel Administration
- MGT 3623 Compensation Administration
- MGT 4633 Labor Relations

or

- MGT 4653 Collective Bargaining
- MGT 4803 Human Resources Management

6 additional semester hours in personnel/human resources, as approved by the student's advisor

- B. 24 hours of support work:

1. ACC 2043 Introduction to Accounting Topics
2. MGT 3023 Organizational Behavior
3. 18 hours of electives outside the College of Business.

**COURSE DESCRIPTIONS
MANAGEMENT
(MGT)**

3013 Introduction to Organization Theory, Behavior and Management

(3-0) 3 hours credit.

Opportunity for study of the various organizations and management theory (empirical, behavioral, quantitative) process. Builds base for identification analysis, and synthesis of managerial concepts as related to complex organizations.

3023 Organizational Behavior

(3-0) 3 hours credit. Prerequisite: MGT 3013 or the equivalent.
Behavioral theory and empirically-derived knowledge as it relates to the functioning of individuals, pairs, and groups in organizations. Investigation of organization as a complex of tasks, structures, tools, and people in states of continuous change.

3033 Quantitative Decision Analysis and Production

(3-0) 3 hours credit. Prerequisite: MGT 3013.
Basic techniques of decision analysis applied to problems in business and economics with an emphasis on production problems. Techniques include modeling and optimization of deterministic and non-deterministic systems in the applied areas of business and economics.

3043 Business Communications

(3-0) 3 hours credit. Prerequisite: MGT 3013 or consent of Division Director or Dean.
Basic communication theory, with practical application in business organizations. Correspondence strategy and report planning and preparation, including research and analysis, organization, and visual displays. Role of ethics in business communication. Written and oral presentations.

3053 Management Science

(3-0) 3 hours credit.
General concepts of decision support systems, expert systems, artificial intelligence, and the role of computers and humans in managerial decision systems. Surveys applications of these systems.

3123 Organizational Communications

(3-0) 3 hours credit. Prerequisites: MGT 3013 and MGT 3023 or their equivalents.
Importance of and problems in effective communication within the organizational setting. Special emphasis will be given to problems of horizontal and vertical communication, communication blockages, informal communication channels, and the effects of organizational structure and leadership pattern on communication. The course will also stress the means of evaluating organizational communication effectiveness.

3253 Interpersonal Communication

(3-0) 3 hours credit. Prerequisite: MGT 3043 or the equivalent.
Dynamics of interpersonal communication. The course stresses the social context of communication and gives emphasis to the effects of status, rank, culture, group affiliation, attraction, etc., on the communicating parties. Both verbal and non-verbal interactions are explored in terms of consequences on the communication process.

3313 Statistical Applications in Business

(3-0) 3 hours credit. Prerequisites: MGT 3033 or the equivalent.
Applications of statistics in a variety of business situations. Examples of and procedures for experimental design, data collection and display, data interpretation, hypothesis testing, and forecasting in business and economic systems. Emphasis on the use of computer statistical packages such as SPSS and SAS.

3613 Personnel Administration

(3-0) 3 hours credit. Prerequisite: MGT 3013 or consent of instructor.
Analysis of the management of personnel systems with special focus on policy and planning considerations. Designed to provide a comprehensive understanding of the functional areas of personnel and the integration of these functions into an effective and efficient personnel system.

3623 Compensation Administration

(3-0) 3 hours credit. Prerequisite: MGT 3613 or the equivalent.
Development and administration of wage and salary programs for organizations. Emphasis upon objectives, policies, organization, and control of compensation systems.

4203 Business and Society

(3-0) 3 hours credit. Prerequisite: Upper-division standing or consent of instructor.
A study of the impact of societal influences on the managerial decision making process. Special attention given to business-government relationships and the role of the organization in the community.

4213 Advanced Organization Theory

(3-0) 3 hours credit. Prerequisites: MGT 3013 and MGT 3023 or their equivalents.

Advanced study of the structure and process of organizations. Emphasis upon such topics as typologies of organizational complexity and formalization, communication and decision making processes, and organizational development and change. Contingency views of organizations are stressed.

4223 Career Development

(3-0) 3 hours credit. Prerequisite: MGT 3613.

Focus is on developmental processes of managerial talent in organizations. Emphasis is placed on topics such as needs analysis, routes to the executive suite, selection techniques for managers, managerial styles, recruitment sources, career crises, and political realities in the organization.

4323 Simulation Applications in Business

(3-0) 3 hours credit. Prerequisite: MGT 3033.

Examples of computer simulation in financial, marketing, management, and economic systems. Techniques for modeling and for analyzing models within business environments. Formerly MGT 3323. Credit cannot be earned for both 3323 and 4323.

4333 Management Information Systems

(3-0) 3 hours credit. Prerequisites: MGT 3013 and MGT 3033 or their equivalents.

A study of the information needs of business and automated methods of acquiring, storing, updating, and retrieving useful information. Explores the use of both mini-computer and micro-computer information systems and decision support systems. Formerly MGT 3333. Credit cannot be earned for both MGT 3333 and 4333.

4343 Production Management Applications

(3-0) 3 hours credit. Prerequisite: MGT 3033.

A study of traditional production functions including scheduling, materials management, quality assurance, facility planning, and human resource utilization, together with a survey of modern production technology including robotics, CAD/CAM, and high technology materials and processes. Credit cannot be earned for both MGT 3343 and 4343.

4353 Advanced Projects in Management Science

(3-0) 3 hours credit. Prerequisites: MGT 3033, MGT 3053.

Students will participate in the design and development of managerial support systems.

4583 Current Technology: Issues for Business

(3-0) 3 hours credit. Prerequisite: MGT 3033.

Survey of state-of-the-art technology in selected industries from a business perspective. Topics include robotics, flexible manufacturing systems, expert systems, artificial intelligence, office automation, and microcomputer systems and networks. Emphasis is on identifying what is currently available and on exploring future trends and consequences.

4593 Advanced Quantitative Decision Analysis

(3-0) 3 hours credit. Prerequisites: MGT 3303 and MGT 3343.

Detailed study of applications of quantitative decision analysis to policy and planning systems. Designed to provide a comprehensive understanding of the state of the art in quantitative decision analysis techniques used in developing effective and efficient management systems.

4633 Labor Relations

(3-0) 3 hours credit. Prerequisite: MGT 3613 or the equivalent.

A contemporary analysis of the union-management relationship in both business and non-business organizations. Topics include union organizing activities, collective bargaining, and agreement administration.

4643 Human Resources Law

(3-0) 3 hours credit. Prerequisite: MGT 3613 or the equivalent.

An analysis of historical and contemporary laws in the United States which affect the personnel function. Integration of labor and employment law with the social and economic forces shaping the current labor-management environment.

4653 Collective Bargaining in Public Employment

(3-0) 3 hours credit. Prerequisites: MGT 3613, or POL 3703, or consent of instructor. History and current status of collective bargaining practices, contract administration, and governmental policies in the public and not-for-profit sectors.

4663 Training and Safety

(3-0) 3 hours credit. Prerequisite: MGT 3613 or consent of instructor. A study of the process of attaining effective work performance. The course exposes students to training techniques which may be used to improve work performance and to the legal requirements in providing a safe work environment.

4673 Appraisal and Interviewing

(3-0) 3 hours credit. Prerequisite: MGT 3613 or consent of instructor. A study of performance appraisal and personnel interviewing from the perspective of the administration of the personnel function. The course examines and evaluates performance appraisal systems and methods. It evaluates interviewing techniques and emphasizes interviewing skills.

4803 Human Resources Management

(3-0) 3 hours credit. Prerequisites: MGT 3613, 3623, and MGT 4633, or their equivalents. Focuses on federal legislation applicable to selection and promotion decisions, methods of validating selection procedures, implementation of affirmative action programs, and methods of forecasting future human resource requirements. Emphasis is placed upon integrating these functions and others into an overall personnel policy.

4863 Ethical and Social Issues in Management

(3-0) 3 hours credit. Prerequisite: Upper-division standing or consent of instructor. Students challenged to order thought, values, and behavior in operational, directional, and constitutional contexts. Develops a moral frame of reference offering the opportunity for both individual and operational guidance contributing to social justice.

4883 Small Business Management

(3-0) 3 hours credit. Prerequisites: Senior standing and completion of at least 42 semester hours of B.B.A. work. Focuses on the operation of small businesses. Analysis of the accounting, finance, production, and marketing functions as they pertain to entrepreneurial endeavors. Develops overall managerial awareness and analytical skills in small business problem solving. Provides an opportunity to work with a small business as a student consultant.

4893 Business Policies and Management

(3-0) 3 hours credit. Prerequisite: Semester of graduation and consent of instructor. Capstone integration of marketing, finance, accounting, production, procurement, personnel policies emphasized through case studies and business simulations. The integration of social, political, and ethical dimensions of managerial decision making.

4912-3 Independent Study

2-3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, Division Director and Dean of the College in which the course is taken. Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4933 Internship in Management

3 hours credit. Prerequisites: 9 hours of management and permission in writing (form available) of the instructor, the student's advisor, Division Director and Dean. The opportunity for work experience in research or operations, including personnel. May be undertaken in either private business or a public agency. Opportunities developed in consultation with faculty Advisor and Division Director and requires approval of both. Internships may be repeated twice (a total of 6 hours) provided the Internships are with different organizations.

4953 Special Studies in Management

3 hours credit. Prerequisite: Consent of instructor. An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

BACHELOR OF BUSINESS ADMINISTRATION DEGREE IN MARKETING

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 129.

In addition to the General Education Requirements and requirements from the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete 42 additional semester hours.

- A. 18 upper-division semester hours in the major in addition to the 3 hours of CKB in the major:
 - MKT 3023 Marketing Analysis for Decision Making
 - MKT 4083 Marketing Research
 - 12 additional hours of MKT electives
- B. 24 hours of support work:
 - 1. ACC 2043 Introduction to Accounting Topics
 - 2. 3 hours of College of Business upper-division electives
 - 3. 18 hours of electives outside the College of Business.

COURSE DESCRIPTIONS MARKETING (MKT)

3013 Principles of Marketing

(3-0) 3 hours credit.

Introduction to the basic components of marketing including product policy, promotion, consumer behavior and pricing. Emphasis on current marketing practices.

3023 Marketing Analysis for Decision Making

(3-0) 3 hours credit. Prerequisite: MKT 3013.

A focus on the more sophisticated analytical tools used in marketing for decision making. The intent is to integrate models from accounting, finance, and marketing to analyze market information and market opportunities. Personal Computers are integrated into a marketing decision support system.

3033 Promotion

(3-0) 3 hours credit. Prerequisite: MKT 3013 or the equivalent.

Emphasis is placed on the coordination of advertising, personal selling, and sales promotion into a promotional-mix and the integration of this program into the total marketing-mix of the firm.

3043 Advertising

(3-0) 3 hours credit. Prerequisites: MKT 3013 and MKT 3033 or their equivalents.

A specialized course covering the theory and practice of advertising. The course stresses planning advertising strategy, developing advertising messages, selecting advertising media, and testing advertising effectiveness. Also, the course explores the theory and history of advertising, the social and economic aspects of advertising, and the problems of ethics and truth in advertising.

3053 Sales Management

(3-0) 3 hours credit. Prerequisite: MKT 3013 or the equivalent.

An examination of managerial strategies, goals, and tools of analysis in the administration of an effective sales force.

3063 Persuasive Communication in Marketing

(3-0) 3 hours credit. Prerequisite: MKT 3013 or the equivalent.

Professional salesmanship is the primary focus of this course. Fundamentals of persuasive interpersonal communication and buyer motivation are stressed as the foundation to effective selling.

3093 Product Management

(3-0) 3 hours credit. Prerequisite: MKT 3013 or the equivalent.

Basic product and strategy concepts are examined including the management of innovation and market-product integration; product development, modification and elimination strategies are studied.

3113 Retailing

(3-0) 3 hours credit. Prerequisite: MKT 3013 or the equivalent.

Examination of retailing as a specialized economic and social institution within the distribution process. Emphasis is on strategy and resource management for the retail firm; critical variables, forces, and processes are examined from a managerial perspective.

3133 Distribution

(3-0) 3 hours credit. Prerequisite: MKT 3013 or the equivalent.

An examination of channels of distribution considering behavioral, social, and economic aspects of the distribution system. Also, the course explores such topics as franchising, logistics, power and conflict roles, and trends in distributive costs.

4023 Industrial Marketing

(3-0) 3 hours credit. Prerequisite: MKT 3023 or the equivalent.

Integrating the marketing concept in industrial situations. Emphasis is on the marketing problems associated with high technology products.

4073 International Marketing

(3-0) 3 hours credit. Prerequisite: MKT 3013 or the equivalent.

Comparative analysis of cultural, legal, political, economic, and technological environments as they affect marketing strategy in the international market-place. Special emphasis on problems of the multi-national corporation and its role in the current world economy.

4083 Marketing Research

(3-0) 3 hours credit. Prerequisite: MKT 3023 or the equivalent.

Offers the opportunity for practical experience in conducting and interpreting marketing research. Includes problem definition, questionnaire design, sampling procedures, data analysis and presentation of results.

4093 Consumer Behavior

(3-0) 3 hours credit. Prerequisite: MKT 3013 or the equivalent.

An interdisciplinary approach to the processes of purchase decisions from the standpoint of both consumers and marketers. Consideration is given to implications for marketing from social science theory and methodology, public policy decisions and the consumerist movement.

4103 Current Topics in Marketing

(3-0) 3 hours credit. Prerequisite: MKT 3013 or the equivalent.

Analysis of current trends in marketing problems and policies. Critical analysis of marketing, consideration of current developments in theory; activities of regulatory agencies; analysis of ethical, social, and public policy aspects of marketing changes. May be repeated for credit when topics vary.

4893 Marketing Strategy

(3-0) 3 hours credit. Prerequisite: 9 hours of Marketing

Offers the opportunity for a comprehensive understanding of the functional areas of marketing and the integration of these functions into an effective marketing strategy.

4911 & 3 Independent Study

1 & 3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, Division Director and Dean of the College in which the course is taken. Independent reading, research, discussion and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4933 Internship in Marketing

3 hours credit. Prerequisites: 9 hours of marketing and permission in writing (form available) of the instructor, the student's advisor, Division Director and Dean.

The opportunity to gain knowledge through the experiential activities of organizational life. Joint cooperation with business, government, and health science institutions in struc-

turing and monitoring work experience aimed at supplementing the learning process. Opportunities developed in consultation with faculty Advisor and Division Director and requires approval of both. Internships may be repeated twice (a total of 6 hours) provided the Internships are with different organizations.

4953 Special Studies in Marketing

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

COLLEGE OF FINE ARTS AND HUMANITIES
DIVISION OF ART AND DESIGN
BACHELOR OF FINE ARTS DEGREE IN ART AND DESIGN
WITH A CONCENTRATION IN ART

The Bachelor of Fine Arts Degree Program in Art is fully accredited by the National Association of Schools of Art and Design and conforms to their recommended guidelines. The degree is awarded in recognition of successful completion of prolonged and intensive studio course work with supportive studies in Art History and Criticism. The final two years of study include a specialization in one of the following areas: Drawing, Ceramics, Painting, Photography, Printmaking, or Sculpture.

Transfer students with upper division art courses on their transcripts should present a portfolio of work to the Division of Art and Design prior to the registration period. This portfolio should consist of 10 original examples or 2 × 2 slides of work from courses taken at another institution.

Applicants seeking a program of studies with emphasis on Art History and Criticism or a less intensive studio art program should refer to the Bachelor of Arts Degree in Humanities.

The minimum number of semester hours required for this degree is 129, including 42 semester hours General Education Requirements and 87 semester hours in the art concentration.

All candidates for the degree must complete: 69 semester hours of Art and 18 semester hours of Art History and Criticism.

A. 18 semester hours of Studio Core Courses:

- ART 1003 Design: Two Dimensional
- ART 1013 Design: Three Dimensional
- ART 1213 Drawing I
- ART 1223 Drawing II
- ART 2213 Drawing: Figure
- ART 2313 Theory and Methods of Three Dimensional Art

B. 12 additional semester hours must be selected from the following lower-division Art courses:

- ART 2113 Painting: Basic
- ART 2213 Drawing: Figure
- ART 2413 Printmaking: Basic
- ART 2513 Photography: Basic
- ART 2613 Sculpture: Basic
- ART 2713 Ceramics: Basic

C. 21 semester hours are required in upper-division Art courses, in one of the following specializations: Ceramics, Drawing, Painting, Photography, Printmaking, or Sculpture and must include ART 4903 Senior Studio Problems and ART 4933 Bachelor of Fine Arts Exhibition.

D. 18 additional semester hours are required in Art courses. No less than 12 semester hours must be in upper-division Art courses.

E. 18 semester hours are required in Art History and Criticism courses, including:

- AHC 1113 Art & Architecture I: Ancient through Medieval
- AHC 1123 Art & Architecture II: Renaissance through Eighteenth Century
- AHC 1133 Art & Architecture III: Nineteenth and Twentieth Centuries

COURSE DESCRIPTIONS

ART (ART)

- 1003 Design: Two Dimensional**
(0-6) 3 hours credit.
Exploration of shape, pattern, texture, color, organization, and structural principles of two dimensional surfaces.
- 1013 Design: Three Dimensional**
(0-6) 3 hours credit.
Exploration of shape, pattern, texture, organization, and structural principles of multi-dimensional forms.
- 1153 Painting for Non-Art Majors**
(0-6) 3 hours credit.
An introduction to the fundamentals of painting. Credit not applicable to concentration in Art.
- 1163 Drawing for Non-Art Majors**
(0-6) 3 hours credit.
An introduction to the fundamentals of drawing. Credit not applicable to concentration in Art.
- 1173 Photography for Non-Art Majors**
(0-6) 3 hours credit.
Techniques and basic methods of creative photography. Students are expected to provide their own cameras. Credit not applicable to concentration in Art.
- 1213 Drawing I**
(0-6) 3 hours credit.
Emphasis on observation and development of perceptual skills as they relate to drawing; includes systems of perspective.
- 1223 Drawing II**
(0-6) 3 hours credit. Prerequisite: ART 1213.
Emphasis on observation and opportunities for development of perceptual skills and conceptual principles in drawing through various approaches and media.
- 2113 Painting: Basic**
(0-6) 3 hours credit. Prerequisites: ART 1003, 1013, 1213, and 1223.
Instruction in basic painting concepts and materials.
- 2213 Drawing: Figure**
(0-6) 3 hours credit. Prerequisites: ART 1213 and 1223.
Study of the human figure and its anatomical and structural dynamics. May be repeated for credit.
- 2313 Theory and Methods of Three-Dimensional Art**
(0-6) 3 hours credit.
Exploration of art theories and techniques and their appropriate use in three-dimensional expression.
- 2413 Printmaking: Basic**
(0-6) 3 hours credit. Prerequisites: ART 1003, 1013, 1213, and 1223.
Introduction to printmaking processes, concepts, and materials.
- 2513 Photography: Basic**
(0-6) 3 hours credit. Prerequisites: Either ART 1003, 1013, 1213, and 1223 or ARC 1213, 1223, and ART 1213.
Introduction to photographic image making, technical principles, and laboratory procedures. Students are expected to provide their own cameras.
- 2613 Sculpture: Basic**
(0-6) 3 hours credit. Prerequisites: ART 1003, 1013, 1213, and 1223.
Instruction in basic sculptural concepts and materials.

- 2713 Ceramics: Basic**
(0-6) 3 hours credit. Prerequisites: ART 1003, 1013, 1213, and 1223.
Instruction in basic ceramic concepts and techniques.
- 3013 Color**
(2-2) 3 hours credit.
Study of color properties and interactions, including the processes and theories of color perception.
- 3113 Painting: Intermediate**
(0-6) 3 hours credit. Prerequisite: ART 2113.
Concepts and methods of painting with an emphasis on the synthesis of idea and means. May be repeated once for credit.
- 3213 Drawing: Intermediate**
(0-6) 3 hours credit. Prerequisites: ART 1213, 1223, and 2213.
Concepts and methods of drawing with an emphasis on the synthesis of idea and means. May be repeated once for credit.
- 3513 Photography: Intermediate**
(0-6) 3 hours credit. Prerequisite: ART 2513.
Concentration on the concepts and methods of photography and its aesthetic premises. Students are expected to provide their own cameras. May be repeated once for credit.
- 4133 Painting**
(0-6) 3 hours credit. Prerequisite: Six credit hours in ART 3113.
An emphasis on the development of a personal vision and individual approach to the use of the medium. May be repeated for credit.
- 4233 Drawing**
(0-6) 3 hours credit. Prerequisite: ART 2213 and upper division standing.
An emphasis on the development of a personal vision and individual approach to the use of the medium. May be repeated for credit.
- 4433 Printmaking**
(0-6) 3 hours credit. Prerequisite: ART 2413 and upper division standing.
An emphasis on the development of a personal vision and individual approach to the use of the medium including experimentation in multiple processes. May be repeated for credit.
- 4533 Photography**
(0-6) 3 hours credit. Prerequisite: Six credit hours in ART 3513.
An emphasis on the development of a personal vision and individual approach to the use of the medium. May be repeated for credit.
- 4673 Sculpture**
(0-6) 3 hours credit. Prerequisite: ART 2613 and upper division standing.
An emphasis on the development of a personal vision and individual approach to the use of the medium. May be repeated for credit.
- 4753 Ceramics**
(0-6) 3 hours credit. Prerequisite: ART 2713 and upper division standing.
An emphasis on the development of a personal vision and individual approach to the use of the medium. May be repeated for credit.
- 4833 Graphic Design**
(0-6) 3 hours credit. Prerequisite: Upper Division standing in Art.
A course for Art majors intended to introduce them to problems in printing, typography, and book and folio design.
- 4903 Senior Studio Problems**
(0-6) 3 hours credit. Prerequisite: 12 semester hours completed in area of specialization and consent of instructor.
An organized course with advanced art concepts through individual class critiques and discussions of formal problems in art using projects executed by the students in their areas of specialization. Required of all BFA candidates. May be repeated once for credit.

4913 Independent Study

3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, and the Division Director and Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4933 Bachelor of Fine Arts Exhibition

3 hours credit. Prerequisites: Approval of Division Director and Application for Degree. With faculty supervision, the student will complete a body of work in the area of specialization representing the culmination of the course of studies for the BFA degree. A selection of this work will be presented in an exhibition. Required of all BFA degree candidates.

4953 Special Studies in Art

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

**COURSE DESCRIPTIONS
ART HISTORY AND CRITICISM
(AHC)**

1033 Masterworks in Art

(3-0) 3 hours credit.

A study of key works in art and architecture of the Western World. May not be applied to a major in Art.

1113 Art and Architecture I: Ancient through Medieval

(3-0) 3 hours credit.

A study of art and architecture of Egypt, the near East, and Europe (Western Civilization) from prehistoric times to 1400 A.D.

1123 Art and Architecture II: Renaissance through Eighteenth Century

(3-0) 3 hours credit.

A study of art and architecture in Europe and the U.S. from 1400 to 1800.

1133 Art and Architecture III: Nineteenth and Twentieth Centuries

(3-0) 3 hours credit.

A study of art and architecture in Europe and the U.S. from 1800 to the present.

3123 Northern European Art: Fifteenth and Sixteenth Centuries

(3-0) 3 hours credit.

A study of fifteenth and sixteenth century art of Northern Europe. Emphasis is placed on the development of the arts primarily in Flanders and Germany.

3133 Southern European Art: Fifteenth and Sixteenth Centuries

(3-0) 3 hours credit.

A study of painting, sculpture, and architecture in Southern Europe in the fifteenth and sixteenth centuries with primary emphasis on Renaissance Italy.

3143 European Art: Seventeenth through Eighteenth Centuries

(3-0) 3 hours credit.

A study of the Baroque and Rococo art of Europe in the seventeenth and eighteenth centuries.

3223 Spanish Art

(3-0) 3 hours credit.

Art and architecture in the Iberian Peninsula primarily from the seventh century to the nineteenth century.

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**Bachelor of Fine Arts Degree in Art and Design
with a Concentration in Architectural Design**

3363 European and United States Art: Nineteenth Century

(3-0) 3 hours credit.

Painting, sculpture, and the graphic arts in Europe and the United States from 1790 to 1900. Credit cannot be received for both AHC 3363 and 3323.

3373 European and United States Art: Twentieth Century

(3-0) 3 hours credit.

Painting, sculpture, and the graphic arts in Europe and the United States from 1900 to the present. Credit cannot be received for both AHC 3373 and 3333.

3423 Pre-Columbian Art and Architecture of Mesoamerica

(3-0) 3 hours credit.

A study of art and architecture in ancient Guatemala, Mexico, Belize, and Honduras.

3453 New World Hispanic Art and Architecture

(3-0) 3 hours credit.

A study of art and architecture of North and South America from the Colonial periods to the nineteenth century.

3813 History of Photography

(3-0) 3 hours credit.

The history of photography from its inception to the present.

4113 Contemporary Art of the United States

(3-0) 3 hours credit.

A study of the major movements in the visual arts in the United States from 1940 to the present.

4133 Contemporary Hispanic American Art of the U.S.

(3-0) 3 hours credit.

A study of twentieth century Spanish-American, Mexican-American Chicano, and other Latino Hispanic art in the United States.

4333 Topics in Art History and Criticism

(3-0) 3 hours credit.

Focus on a specific period, medium, or a theoretical and critical issue within the history and criticism of art. May be repeated for credit when topics vary.

4423 Contemporary Art of Latin America

(3-0) 3 hours credit.

A study of twentieth century art in Latin America.

4913 Independent Study

3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, and the Division Director and Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4933 Art Gallery and Museum Internship

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

Supervised experience related to preparation and installation of exhibitions in gallery and museum settings.

**BACHELOR OF FINE ARTS DEGREE IN ART AND DESIGN WITH A
CONCENTRATION IN ARCHITECTURAL DESIGN**

The Bachelor of Fine Arts Degree with a concentration in Architectural Design is a four-year degree. The minimum number of semester hours required for the degree, including 42 hours of General Education Requirements, is 138³.

All candidates for the degree must complete:

**Bachelor of Fine Arts Degree in Art and Design / 117
with a Concentration in Architectural Design**

A. 90 semester hours in the *major*, 57 of which must be at the upper-division level.

1. 33 semester hours of required lower-division architectural courses are:

- ARC 1213 Architectural Design I
- ARC 1223 Architectural Design II
- ARC 1312 Architectural Graphics
- ARC 1413 Architecture and Society
- ARC 2113 Architectural Design III
- ARC 2123 Architectural Design IV
- ARC 2213 Construction I
- ARC 2223 Construction II
- ARC 2312 Architectural Rendering I
- ARC 2322 Architectural Rendering II
- ARC 2413 History of Architecture I
- ARC 2423 History of Architecture II

2. 33 semester hours of required upper-division architectural courses are:

- ARC 3233 Construction III
- ARC 3243 Construction IV
- ARC 3313 Environmental Control Systems I
- ARC 3323 Environmental Control Systems II
- ARC 3413 Architectural Documents I
- ARC 3423 Architectural Documents II
- ARC 3613 History of Modern Architecture
- ARC 4513 Professional Practice
- ARC 3203 Housing and Land Development
- ARC 4013 Building Construction Estimating
- ARC 4143 Architecture Topics
- or
- ARC 3333 Practicum

3. 24 semester hours of required upper-division Architectural Design Studio (ARC 4146) with a grade of at least C in each course.

B. 13 semester hours of *support work* are:

- MAT 1214 Calculus I
- PHY 1603 General Physics I
- PHY 1623 General Physics II
- ART 1213 Drawing I

C. Brochure Requirement.

Upon completion of the initial two semesters of Architectural Design Studio (ARC 4146) with a grade of at least C, each student must obtain written authorization to enter the final two semesters of ARC 4146. This is done by submitting a brochure that includes work from previous and current classes in design and visual communication. In addition, a student may include supplementary material that gives evidence of his or her design, graphic and professional accomplishments.

If the Review Committee, after reviewing the brochure, does not accept the student into the final two semesters of ARC 4146, the student may resubmit a brochure for the next review period.

³MAT 1214 and PHY 1603 may be used to satisfy the GER for mathematics and science.

BACHELOR OF FINE ARTS DEGREE IN ART AND DESIGN WITH A CONCENTRATION IN INTERIOR DESIGN

The Bachelor of Fine Arts Degree with a concentration in Interior Design is a four-year degree. The minimum number of semester hours required for the degree, including 42 hours of General Education Requirements, is 135.

All candidates for the degree must complete:

A. 84 semester hours in the *major*, 54 of which must be at the upper-division level.

1. 30 semester hours of required lower-division interior design courses:

- ARC 1213 Architectural Design I
- ARC 1223 Architectural Design II
- ARC 1312 Architectural Graphics
- ARC 1413 Architecture and Society
- ARC 2113 Architectural Design III
- ARC 2123 Architectural Design IV
- ARC 2213 Construction I
- ARC 2413 History of Architecture I
- ARC 2423 History of Architecture II
- ARC 2312 Architectural Rendering I
- ARC 2322 Architectural Rendering II

2. 30 semester hours of required upper-division interior design courses:

- ARC 3143 Interior Materials I
- ARC 3153 Interior Materials II
- ARC 3213 History of Furniture
- ARC 3313 Environmental Control Systems I
- ARC 3613 History of Modern Architecture
- ARC 4213 Furniture Design
- ARC 4513 Professional Practice
- ARC 3413 Architectural Documents I
- ARC 3423 Architectural Documents II
- ARC 4143 Architecture Topics

or

- ARC 3333 Practicum

3. 24 semester hours of required upper-division Interior Design Studio (ARC 4166) with a grade of at least C in each course.

B. 9 semester hours of required *support work*:

- ART 1213 Drawing I
- ART 2513 Photography: Basic
- ART 3013 Color

C. Brochure Requirement.

Upon completion of the initial two semesters of Interior Design Studio (ARC 4166) with a grade of at least C, each student must obtain written authorization to enter the final two semesters of ARC 4166. This is done by submitting a brochure that includes work from previous and current classes in design and visual communication. In addition, a student may include supplementary material that gives evidence of his or her design, graphic and professional accomplishments.

If the Review Committee, after reviewing the brochure, does not accept the student into the final two semesters of ARC 4166, the student may resubmit a brochure for the next review period.

**COURSE DESCRIPTIONS
ARCHITECTURAL DESIGN
(ARC)**

- 1213 Architectural Design I**
(0-6) 3 hours credit.
Study of the visual elements and organization of two and three dimensional space as related to architectural form.
- 1223 Architectural Design II**
(0-6) 3 hours credit. Prerequisite: ARC 1213.
Further investigation of three dimensional space with emphasis on movement and enclosure.
- 1312 Architectural Graphics**
(0-4) 2 hours credit.
Introduction to architectural graphic communication and the use of drafting materials and equipment.
- 1413 Architecture and Society**
(3-0) 3 hours credit.
Introduction to the history, theory, and practice of architecture.
- 2113 Architectural Design III**
(0-6) 3 hours credit. Prerequisites: ARC 1223 and 1322.
A series of basic architectural and interior design problems with emphasis on both exterior and interior space, form, and content.
- 2123 Architectural Design IV**
(0-6) 3 hours credit. Prerequisite: ARC 2113.
A continuation of basic architectural and interior design problems with emphasis on specific design solutions.
- 2213 Construction I**
(3-0) 3 hours credit. Prerequisites: ARC 1213 and 1312 or a major in Building Development.
Introduction to building systems and materials.
- 2223 Construction II**
(3-0) 3 hours credit. Prerequisites: ARC 2213 or ARC 2214, MAT 1214, PHY 1603.
A study of statics and strength of materials.
- 2312 Architectural Rendering I**
(0-4) 2 hours credit. Prerequisites: ARC 1223 and 1312 and ART 1213.
Introduction to the principles of orthographic projection, constructed perspective, and mechanically cast shade and shadow.
- 2322 Architectural Rendering II**
(0-4) 2 hours credit. Prerequisite: ARC 2312.
The study of color theory and its application in buildings and architectural renderings.
- 2413 History of Architecture I**
(3-0) 3 hours credit.
A survey of architecture from ancient history through 1750.
- 2423 History of Architecture II**
(3-0) 3 hours credit. Prerequisite: ARC 2413.
A survey of architecture from 1750 to the present.
- 3143 Interior Materials I**
(3-0) 3 hours credit. Prerequisite: ARC 2123.
Study of materials used in interior spaces: selection, use, and care.
- 3153 Interior Materials II**
(3-0) 3 hours credit. Prerequisite: ARC 3143.
A continued study of materials used in interior spaces, their specifications and installation.

3203 Housing and Land Development

(3-0) 3 hours credit. Prerequisites: ARC 2123 or a major in Building Development. Analysis of the purchase and development of land for residential uses. Residential and site design considerations in terms of codes, zoning ordinance, utility needs, and engineering problems are examined.

3213 History of Furniture

(3-0) 3 hours credit. Prerequisite: ARC 2123.
A history of periods of furniture design from antiquity to the present.

3233 Construction III

(3-0) 3 hours credit. Prerequisites: ARC 2123 and 2223, MAT 1214, PHY 1603 and 1623. The study of the design and behavior of structural steel and timber systems, including the application of building specifications.

3243 Construction IV

(3-0) 3 hours credit. Prerequisite: ARC 3233.
The study of the design and behavior of structural concrete systems, including the application of building specifications.

3313 Environmental Control Systems I

(3-0) 3 hours credit. Prerequisite: ARC 2123 or the equivalent, or upper-division standing in the Building Development Concentration.
A qualitative and quantitative study of acoustical, electrical, and illumination systems and their integration into a building system.

3323 Environmental Control Systems II

(3-0) 3 hours credit. Prerequisite: ARC 3313.
A qualitative and quantitative study of heating, ventilating, cooling, plumbing, and mechanical movement systems and their integration into a building system.

3333 Practicum

(1-4) 3 hours credit. Prerequisites: ARC 2123 and 2213 or a major in Building Development.
15-20 hours a week in an approved local office under interdisciplinary supervision. Offers Architecture, Interior Design and Building Development majors participation in a variety of design, development and construction concerns. May be repeated once for credit.

3413 Architectural Documents I

(3-0) 3 hours credit. Prerequisites: ARC 2123 or upper-division standing in the Building Development Concentration and ARC 2213, or the equivalent.
An introduction to contract documents as used in the building industry, their preparation and use in communication between the architect, the owner, the contractor, and others.

3423 Architectural Documents II

(0-6) 3 hours credit. Prerequisite: ARC 3413.
A continuation of the study of contract documents with emphasis on the preparation of working drawings and specifications.

3613 History of Modern Architecture

(3-0) 3 hours credit.
A study of modern architecture — its origin and technological and philosophical evolution from the nineteenth century to the present.

4013 Building Construction Estimating

(3-0) 3 hours credit. Prerequisite: ARC 2224.
Introduction to estimating procedures related to quantity surveying and cost of materials and labor in light construction.

4113 Project Development

(1-4) 3 hours credit. Prerequisites: ARC 3203 and 4013 and a major in Building Development.
The application of building development practices to architectural and planning projects.

4143 Architecture Topics

(3-0) 3 hours credit. Prerequisites: ARC 2123 and 2213.
A study of current trends and issues in the architecture and interior design professions.

4146 Architectural Design Studio

(1-10) 6 hours credit. Prerequisite: ARC 2123.

The study of the process of researching, programming, and developing physical design solutions to various building types, including the integration of structural and mechanical systems within the designs. May be repeated for credit.

4166 Interior Design Studio

(1-10) 6 hours credit. Prerequisite: ARC 2123.

The study of the process of researching, programming, and developing physical design solutions to various interior types, including the integration of finishes, fixtures, and furnishings within the design. May be repeated for credit.

4213 Furniture Design

(1-4) 3 hours credit. Prerequisite: ARC 3213.

A studio course in the design, detailing, and construction of furniture.

4513 Professional Practice

(3-0) 3 hours credit. Prerequisite: ARC 2123.

A study of the standards of architectural practice, professional responsibilities, contracts, bonds and ordinances, architectural partnerships, and other considerations of professional practice.

4613 Construction Management

(3-0) 3 hours credit. Prerequisite: Upper-division standing.

The study of the process of construction and its management.

4911-3 Independent Study

1-3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's Advisor, the Division Director, and the Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, may apply to a bachelor's degree.

4953 Special Studies in Architecture

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

DIVISION OF ENGLISH, CLASSICS, AND PHILOSOPHY

BACHELOR OF ARTS DEGREE IN ENGLISH

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 120.⁴

ENG 2213 must be used to satisfy the General Education Requirement in Literary Studies.

All candidates for the degree, except those with Technical Writing Emphasis, must complete:

- A. 30 semester hours in English (in addition to the 9 hours of Composition and Literary Studies listed in the General Education Requirements), 21 of which must be at the upper-division level.
 1. 15 semester hours of required courses are:
 - ENG 2223 Major British Writers I
 - ENG 2233 Major British Writers II
 - ENG 2263 Major American Writers
 - ENG 3223 Shakespeare: The Early Plays
 - or
 - ENG 3233 Shakespeare: The Later Plays
 - ENG 4973 Seminar For English Majors
 2. 15 additional upper division semester hours are required in English.
- B. 12 semester hours of approved support work in *one* of the following categories (at least 6 hours of which must be at the upper-division level):
 1. classics, philosophy, humanities
 2. foreign languages, foreign literature (including foreign literatures in translation), linguistics (including linguistics courses designated ENG provided that they have not been counted toward the required 30 semester hours in English)
 3. communication
 4. writing: creative, technical, expository
 5. American Studies
 6. history and theory of art and of music
 7. other subjects as may be individually justified by the student and approved by the Undergraduate Advisor.

Students who select a support category other than number 1 may apply 6 semester hours of upper-division humanities courses or classics courses toward the English major.
- C. 3 additional hours of the same foreign language used to satisfy the General Education Requirement.
- D. 33 semester hours of electives.

A student whose grade-point average in English prior to the beginning of his or her final year at UT San Antonio is 3.5 or above, and whose overall grade-point average is 3.0, may earn Honors in English. In order to do so, a student must complete a substantial paper approved by the Honors Committee and have a 3.5 grade-point average both in the major and in support work. The grade-point average requirements apply to all transfer work as well as work taken at The University of Texas at San Antonio.

⁴Thirty-nine of the total semester hours required for the degree must be at the upper-division level.

Students seeking teacher certification should consult the Undergraduate Certification Programs in Education brochure for information.

TECHNICAL WRITING EMPHASIS

All candidates for the degree with Technical Writing emphasis must complete:

A. 30 semester hours in English (in addition to the 6 hours of Composition in the General Education Requirements), 21 of which must be at the upper-division level.

1. 15 semester hours of required courses are:

- ENG 2223 Major British Writers I
- ENG 2233 Major British Writers II
- ENG 2263 Major American Writers
- ENG 3223 Shakespeare: The Early Plays
- or
- ENG 3233 Shakespeare: The Later Plays
- ENG 4973 Seminar for English Majors

2. 15 additional semester hours are required in English.

B. 40 semester hours of approved *support work*.

1. 34 hours of required support work

CS 2033	Fundamentals of Computer Concepts I	3 hours
ECO 2023	Introductory Microeconomics	3 hours
ENG 2413	Technical Writing	3 hours
ENG 3313	Advanced Composition	3 hours
ENG 4413	Topics in Writing	3 hours
ENG 4933	Internship	3 hours
MAT 1013	Algebra	3 hours
MAT 1033	Algebra with Calculus for Business	3 hours
MGT 3013	Organization and Management Theory	3 hours
MGT 3043	Business Communication	3 hours
STA 1064	Basic Statistics for Business and Economics	4 hours

Since ENG 4413 and ENG 4933 may be repeated for credit, any additional credit hours earned may be counted under A.2 above.

2. A minimum of 6 hours of support work to be drawn from the following:

COM 1043	Introduction to Communication	3 hours
ENG 3333	Introduction to the Structure of English	3 hours
HUM 3313	The Humanistic Impact of Scientific Revolutions	3 hours
MAT 1093	Precalculus	3 hours
PHI 2043	Introductory Logic	3 hours
PHI 3033	Philosophy of Science	3 hours

C. 8 semester hours of electives.

COURSE DESCRIPTIONS

ENGLISH (ENG)

1003 Basic English

(3-1) 3 hours credit.

Offers the opportunity for increasing writing skills before enrollment in ENG 1013. Intensive practice in the writing process including pre-writing, organization, sentence structure, and use of grammar, spelling, and punctuation. The course is offered on a credit/no-credit basis. Credit cannot be used to satisfy any degree requirements.

1013 Freshman Composition

(3-0) 3 hours credit.

Practical instruction in the principles and methods of clear, effective writing, including that which incorporates external source material. Emphasis is on the writing process and its attendant skills, such as invention, assessment of purpose and audience, organization and development, revision, editing, style, grammar, and mechanics. To receive credit for the course, students will be required to pass a standard exit examination. (This course or the equivalent is required of all undergraduates in fulfilling the General Education Requirements and is normally taken during the first semester of the freshman year.)

1023 Informative and Persuasive Writing

(3-0) 3 hours credit. Prerequisite: ENG 1013 or the equivalent.

Study and practice of informative and persuasive writing techniques and synthesis. (This course or the equivalent is required of all undergraduates in fulfilling the General Education Requirements and should be taken as the continuation of ENG 1013.)

2013 Introduction to Literature

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Introductory study of great works of literature with an emphasis on novels, plays, and poetry by British and American authors. Designed for non-majors.

2213 Literary Criticism and Analysis

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

A study of poetry, fiction, and drama, with close attention to literary terms, literary criticism, and the characteristics of each genre. Required of students majoring in English.

2223 Major British Writers I

(3-0) 3 hours credit. Prerequisite: ENG 2213 or Completion of the General Education Requirement in Literary Studies.

Study of representative works of major British writers from Chaucer to Milton, exclusive of Shakespeare. Required of students majoring in English.

2233 Major British Writers II

(3-0) 3 hours credit. Prerequisite: ENG 2213 or Completion of the General Education Requirement in Literary Studies.

Study of representative works of major British writers from the Age of Pope to the early twentieth century. Required of students majoring in English.

2263 Major American Writers

(3-0) 3 hours credit. Prerequisite: ENG 2213 or Completion of the General Education Requirement in Literary Studies.

Study of representative work of major American writers. Required of students majoring in English.

2273 Topics in Popular Literature

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Critical readings in a popular mode such as Science Fiction, Gothic Fiction, Western Fiction, Detective Fiction, or Fantasy. May be repeated for credit when topics vary. Designed for non-majors.

2323 Creative Writing: Fiction

(3-0) 3 hours credit. Prerequisite: Completion of the General Education Requirement in Literary Studies.

Offers the opportunity for intensive practice and development of techniques in the writing of fiction.

2333 Creative Writing: Poetry

(3-0) 3 hours credit. Prerequisite: Completion of the General Education Requirement in Literary Studies.

Offers the opportunity for intensive practice and development of techniques in the writing of poetry.

2373 Literature for Children and Adolescents

(3-0) 3 hours credit. Prerequisite: Completion of the General Education Requirement in Literary Studies.

Literary analysis of the kinds of reading available for children and adolescents: poetry, drama, biography, science fiction, mystery, fantasy. Both classics and current trends will

be considered. Emphasis upon the novel. (Formerly ENG 3373. Credit cannot be earned for both ENG 2373 and ENG 3373.)

2383 Minority Voices in American Literature

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

A survey of the literature of various minority groups such as Native American, Black, and Hispanic. Designed for non-majors.

2413 Technical Writing

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Techniques of expository writing, particularly adapted to students in technological and scientific subjects.

2423 Literature of Texas and the Southwest

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Study of the literature of Texas and the Southwest, including an examination of the region's multicultural heritage. Designed for non-majors.

2613 Introduction to Literary Forms

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Offers the opportunity to discuss classic and contemporary selections from a single literary form: fiction, poetry, or drama. May be repeated for credit when topics vary. Designed for non-majors.

2813 The Latin and Greek Element in English

(3-0) 3 hours credit. Prerequisite: ENG 1023 and Completion of the General Education Requirement in Literary Studies.

Study of the Latin and Greek origins of English vocabulary, including common Latin and Greek prefixes, suffixes, and roots. Attention to the changes in meaning of selected words.

3033 American Literature, 1945 to Present

(3-0) 3 hours credit. Prerequisite: ENG 2213 or 12 hours of English.

Critical study of major American writers of the past three decades.

3053 American Literature to 1870

(3-0) 3 hours credit. Prerequisite: ENG 2213 or 12 hours of English.

Study of major American writers before the late nineteenth century such as Hawthorne, Melville, and Dickinson.

3063 American Literature, 1870-1945

(3-0) 3 hours credit. Prerequisite: ENG 2213 or 12 hours of English.

Study of major American writers of the late nineteenth and early twentieth centuries, including Twain, Eliot, Hemingway, and Faulkner.

3113 Studies in Individual Authors

(3-0) 3 hours credit. Prerequisite: ENG 2213 or 12 hours of English.

Study of the works of an individual British or American author or of several authors studied in relation to one another. May be repeated for credit when authors vary.

3123 Modern Fiction

(3-0) 3 hours credit. Prerequisite: ENG 2213 or 12 hours of English.

Critical survey of American, British, and Continental fiction of the twentieth century studied intensively in relation to the development of characteristically modern techniques.

3133 Women and Literature

(3-0) 3 hours credit. Prerequisite: ENG 2213 or 12 hours of English.

Critical study of the presentation of women and feminist issues in various literary forms.

3143 Modern Drama

(3-0) 3 hours credit. Prerequisite: ENG 2213 or 12 hours of English.

Study of representative plays in the modern dramatic tradition, from the time of Ibsen and Strindberg through contemporary dramatists, with an emphasis on British and American playwrights.

3213 Chaucer

(3-0) 3 hours credit. Prerequisite: ENG 2223 or the equivalent.

Critical study of the *Canterbury Tales* and other poems. Texts in Middle English.

- 3223 Shakespeare: The Early Plays**
(3-0) 3 hours credit. Prerequisite: ENG 2213 or 12 hours of English.
Critical study of comedies, histories, and tragedies from the earlier period (1590-1601).
- 3233 Shakespeare: The Later Plays**
(3-0) 3 hours credit. Prerequisite: ENG 2213 or 12 hours of English.
Critical study of comedies, tragedies, and romances from the later period (1602-1613).
- 3243 The English Novel**
(3-0) 3 hours credit. Prerequisite: ENG 2213 or 12 hours of English.
Critical survey of English novels selected chiefly from the eighteenth and nineteenth centuries.
- 3253 The American Novel**
(3-0) 3 hours credit. Prerequisite: ENG 2213 or 12 hours of English.
Reading and discussion of representative American novels.
- 3303 Composition for Teachers**
(3-0) 3 hours credit. Prerequisite: ENG 2213 or 12 hours of English.
Study of theory and research in composition, with emphasis on application to the teaching of writing.
- 3313 Advanced Composition**
(3-0) 3 hours credit. Prerequisite: ENG 2213 or 12 hours of English.
Study of the principles and procedures of expository and argumentative prose. Emphasis on coherence, liveliness, persuasiveness, and originality. Extensive writing practice.
- 3323 History of the English Language**
(3-0) 3 hours credit. Prerequisite: Completion of the General Education Requirement in Literary Studies.
Historical survey of the development of the English language.
- 3333 Introduction to the Structure of English**
(3-0) 3 hours credit. Prerequisite: Completion of the General Education Requirement in Literary Studies.
Analysis of English syntax from various theoretical perspectives, including traditional, structural, and generative. Consideration of the concept of Standard English and of language variation, especially regional and social variation within modern English.
- 3343 Principles of English Linguistics**
(3-0) 3 hours credit. Prerequisite: Completion of the General Education Requirement in Literary Studies.
Introduction to the goals and procedures of modern linguistics, emphasizing phonetics, phonology, and morphology. Discussion of language acquisition and the neurolinguistic foundations of language ability. Some attention to such topics as semantics, pragmatics, and language change.
- 3393 Theory of Literature**
(3-0) 3 hours credit. Prerequisite: ENG 2213 or 12 hours of English.
Critical study of the nature and function of literature and the relationship of literature to philosophy, history, and the other arts; attention to such topics as stylistics, genres, and literary history. (Formerly HUM 2013. Credit cannot be earned for both ENG 3393 and HUM 2013.)
- 4023 Romantic Literature**
(3-0) 3 hours credit. Prerequisite: ENG 2233 or the equivalent.
Selected readings in the fiction, poetry, and prose of the British Romantic period, with emphasis on Wordsworth, Coleridge, Byron, Keats, and Shelley.
- 4033 Literary Modes and Genres**
(3-0) 3 hours credit. Prerequisite: ENG 2223 or 2233 or the equivalent.
Intensive study of a single mode or genre such as comedy, tragedy, allegory, satire, or epic. May be repeated for credit when topics vary.
- 4053 Modern British and American Poetry**
(3-0) 3 hours credit. Prerequisite: ENG 2233 or 2263 or the equivalent.
Offers the opportunity for an intensive study of the chief modern poets with emphasis on Yeats, Eliot, Pound, Auden, Stevens, Williams, and Lowell.

4063 Medieval English Literature

(3-0) 3 hours credit. Prerequisite: ENG 2223 or the equivalent.
Study of the major English writings from the Anglo-Saxon and Middle English periods, excluding Chaucer, with special emphasis on *Beowulf* and Chaucer's contemporaries. Some works in translation, but original texts wherever possible.

4113 Renaissance Literature

(3-0) 3 hours credit. Prerequisite: ENG 2223 or the equivalent.
Selected readings from major writers of the sixteenth and seventeenth centuries (exclusive of Shakespeare) with emphasis on Spenser, Donne, Jonson, and Milton.

4143 Victorian Literature

(3-0) 3 hours credit. Prerequisite: ENG 2233 or the equivalent.
Selected readings in the fiction, poetry, and non-fiction prose of major Victorian writers with emphasis on Tennyson, Browning, Eliot, Dickens, Hardy, and Hopkins.

4413 Topics in Writing

(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Offers the opportunity for intensive development of a particular type of writing, such as persuasive writing, writing for medicine, writing for law, and other types of technical writing. May be repeated for credit when topics vary.

4513 Writer's Workshop: Advanced Creative Writing

(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Designed for students who have demonstrated their potential as poets or fiction writers. Each semester the workshop will focus on the writing of one genre, either poetry or fiction. May be repeated for credit, but not more than 12 hours will apply to a bachelor's degree, and not more than 6 hours will apply toward the English major.

4911-3 Independent Study

1-3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student's advisor, and the Division Director and Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4933 Internship

(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Supervised experience relevant to English. May be repeated once for credit.

4953 Special Studies In English

3 hours credit. Prerequisite: Consent of instructor.
Organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4973 Seminar for English Majors

(3-0) 3 hours credit. Prerequisite: ENG 2223 or the equivalent.
This undergraduate seminar, limited to English majors in their final year, offers the opportunity to study a genre, author, or period in English or American literature. Content varies with each instructor; may be repeated once for credit when topics vary.

BACHELOR OF ARTS DEGREE IN HUMANITIES

The Bachelor of Arts Degree in Humanities is an interdisciplinary degree program consisting of courses drawn from a number of academic disciplines.

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 120.⁵

All candidates for the degree must complete:

⁵Thirty-nine of the total semester hours required for the degree must be at the upper-division level.

**128 / Bachelor of Arts Degree in Humanities
Humanities**

- A. 45 semester hours in an interdisciplinary *major*, consisting of:
1. 12 semester hours of core courses:
 - CLA 2013 Introduction to Ancient Greece
 - CLA 2023 Introduction to Ancient Rome
 - PHI 2033 Introduction to Modern Philosophy
 - HUM 3413 Man and the Cosmos
 2. 12 semester hours of upper-division work in Humanities, including HUM 4973, Seminar for Humanities Majors.
 3. 21 semester hours, at least 12 hours of which must be at the upper-division level, in the following four areas:
 - (a) classics
 - (b) philosophy
 - (c) art history and criticism
 - (d) literature in one of the following languages (including literature courses in translation and culture and civilization courses): English, French, German, Hebrew, Italian, Spanish, Russian.
- The student must take at least 3 semester hours in each of the four areas listed above.
- The remaining 9 hours may be selected from these four areas (no more than 6 additional hours in any one) or, with the approval of the Undergraduate Advisor, may be selected from other relevant areas such as history, music history, or the social sciences. The whole group should form an interdisciplinary course of study developed in conjunction with the Undergraduate Advisor and designed to aid the student's integration of his or her program in terms of central themes, focal problems, or fields of historical interest.
- B. 3 additional hours of the same foreign language used to satisfy the General Education Requirement.
- C. 30 semester hours of electives.

A student whose grade-point average in the Humanities major prior to the beginning of his or her final year is 3.5 or above may petition the Humanities advisor for permission to work for honors in Humanities. A student seeking honors must complete HUM 4973 during his or her final year; a project beyond the normal requirements of the course must be submitted and approved by the Honors Committee. To graduate with honors in Humanities, a student must have a grade-point average of 3.5 or above in the major. The 3.5 grade-point average required for honors shall be based on all transfer work as well as work taken at UT San Antonio.

**COURSE DESCRIPTIONS
HUMANITIES
(HUM)**

1011-3 Topics in the Humanities

1-3 hours credit.

Introductory study of a topic or issue in the humanities. May be repeated for credit when topics vary, but no more than 3 hours will apply to a bachelor's degree.

2643 Introduction to Film

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Viewing and discussion of classic and contemporary films, selected to illustrate specific film techniques and themes.

3013 History of Ideas

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Survey of the development and influence of major philosophical, ethical, and aesthetic conceptions in Western civilization from ancient times to the present.

3023 The Medieval World

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Interdisciplinary investigation of medieval thought and culture as exemplified in major works of literature, philosophy, theology, and history.

3033 The Renaissance Idea of Man

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Interdisciplinary investigation of Renaissance thought and culture as exemplified in major works of literature, philosophy, theology, and history; emphasis on the fundamental changes in the Western man's view of his world and of himself.

3043 Classicism and Enlightenment

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Interdisciplinary investigation of European thought and culture in the later seventeenth and the eighteenth centuries, as exemplified in major works of philosophy, literature, and the fine arts.

3053 The Romantic Age

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Interdisciplinary investigation of the development of ideas in literature, philosophy, art, politics, and society at the end of the eighteenth and beginning of the nineteenth century. Such figures as Rousseau, Kant, Wordsworth, Goethe, and Goya will be considered.

3083 Religion in America

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Examination of religion and religious life in America and its relation to other aspects of American Culture.

3093 World Religions

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Examination of the origins, teachings, and development of the world's chief religious movements, including Hinduism, Buddhism, Shintoism, Confucianism, Taoism, Sikhism, Janism, Islam, Zoroastrianism, Judaism, and Christianity. (Formerly PHI 3063. Credit cannot be earned for both PHI 3063 and HUM 3093.)

3213 The Christian Classics

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

The opportunity for an intensive survey of selected works of such writers as Augustine, Dante, Milton, Bunyan, Pascal, Hopkins, and Eliot, studied in the context of Christian thought.

3223 The Bible as Literature

(3-0) 3 hours credit. Prerequisite: Completion of the General Education Requirement in Literary Studies.

Offers the opportunity to survey major themes, stories, and motifs in the Old and New Testament with emphasis on those elements fundamental to Western culture. (Formerly ENG 2513. Credit cannot be earned for both HUM 3223 and ENG 2513.)**3263 Modern European Novel**

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Critical study of selected Continental novelists of the last hundred years.

3313 The Humanistic Impact of Scientific Revolutions

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Study of the cultural impact of scientific and technological revolutions.

3413 Man and the Cosmos

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Critical interdisciplinary study of man's search for his place in the universe; the impact of scientific and philosophical inquiry on man's world-view as expressed in literature.

130 / Humanities
Classics

3623 Topics in National Cultures and Civilizations

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

The cultural life of the respective geographic regions and social strata of individual nations of Europe and America as reflected in, and interpreted by their artistic production. Individual topics may focus on a single nation or several nations. May be repeated for credit when topics vary.

4913 Independent Study

3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student's advisor, and the Division Director and Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4953 Special Studies In Humanities

3 hours credit. Prerequisite: Consent of instructor.

Organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4973 Seminar for Humanities Majors

(3-0) 3 hours credit.

Undergraduate seminar limited to Humanities majors in their final year. Content varies with each instructor. May be repeated once for credit when topics vary.

COURSE DESCRIPTIONS

CLASSICS (CLA)

2013 Introduction to Ancient Greece

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Introduction to the civilization and cultural achievements of ancient Greece, including highlights of history, religion, philosophy, literature, and art.

2023 Introduction to Ancient Rome

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Introduction to the civilization and cultural achievements of ancient Rome, including highlights of history, religion, philosophy, literature, and art.

3023 Classical Mythology

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Critical survey of ancient Greek and Roman mythology, both religious and secular; attention to current theories of myth and to the use of myth in ancient literature.

3033 Homer and the Tragic Vision

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Critical study of the tragic literature of ancient Greece with emphasis on the *Iliad* and the dramas of Aeschylus, Sophocles, and Euripides.

3043 Classical Comedy

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Critical study of the comic literature of ancient Greece and Rome with emphasis on the works of Aristophanes, Menander, Plautus, Terence, Petronius, and Apuleius.

3143 Rome and the Vision of Empire

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Critical study of the literature of the Roman Empire. Selections will be drawn from the works of Cicero, Vergil, Ovid, Juvenal, Tacitus, and Petronius.

3623 Topics in Classical Literature

(3-0) 3 hours credit. Prerequisite: Completion of the General Education Requirement in Literary Studies.

Study of a genre or several genres drawn from the literature of Ancient Greece and Rome, such as historiography, biography, lyric and pastoral poetry, and rhetoric and oratory. May be repeated for credit when topics vary.

COURSE DESCRIPTIONS
COMMUNICATION
(COM)

- 1043 Introduction to Communication**
(3-0) 3 hours credit. Prerequisite: ENG 1013 or the equivalent.
Study of communication, with particular emphasis on the elements of informative and persuasive speaking and writing.
- 2113 Public Speaking**
(3-0) 3 hours credit. Prerequisite: COM 1043 or consent of instructor.
Theory and practice of speaking in formal settings. Exercises in preparation, adaptation, and delivery of oral presentations.
- 2343 Introduction to Mass Communication**
(3-0) 3 hours credit.
Survey of mass communication media including print and broadcast media.
- 2383 Relational Communication**
(3-0) 3 hours credit.
A focus on research and theory concerning the role and effects of communication in the creation and maintenance of human relationships such as friendships, marriage, and family.
- 2801 Forensic Activities**
(1-0) 1 hour credit. Prerequisite: Consent of instructor.
Opportunity to study the preparation and presentation of oral argument or speaking in competitive situations. May be repeated for credit. Does not count toward major requirements.
- 3013 Oral Interpretation**
(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.
Theory and practice of oral delivery of readings. Selection and organization of materials for various audiences and consideration of presentational techniques.
- 3083 Language and Communication Theory**
(3-0) 3 hours credit. Prerequisite: COM 1043 or consent of instructor.
An overview of concepts, literature, and research concerning the role of language as approached from general semantics, information theory, psycho- and sociolinguistics with emphasis on the interpretive and motivational effects of language.
- 3113 Argumentation and Debate**
(3-0) 3 hours credit. Prerequisite: COM 1043 or consent of instructor.
Offers the opportunity to train in the preparation, construction, and critical analysis of argumentation. Exercises in oral communication in adversary situations.
- 3243 Persuasion**
(3-0) 3 hours credit. Prerequisite: COM 1043 or consent of instructor.
The study of the use of oral communication to secure social cooperation through change of belief, attitude, and opinion with emphasis on application of theory to message construction and design and execution of persuasive campaigns.
- 3523 Public Relations**
(3-0) 3 hours credit. Prerequisite: COM 1043 or consent of instructor.
An introduction to principles and practices of public relations including consideration of interviewing and conference methods.

COURSE DESCRIPTIONS

PHILOSOPHY (PHI)

2013 Basic Philosophical Problems

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Introduction to philosophy through general problems in metaphysics, epistemology, ethics, political philosophy, and philosophy of religion; emphasis on the writings of philosophers of various historical periods, especially as these doctrines apply to contemporary problems.

2023 Introduction to Ancient Philosophy

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Introduction to ancient philosophy through the study of Plato, Aristotle, Epicurus, and others; emphasis on the Greek contribution to the moral and political ideas of the Western world.

2033 Introduction to Modern Philosophy

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Introduction to modern philosophy, from the Renaissance to the present, through the study of Descartes, Locke, Hume, Leibniz, Kant, Kierkegaard, and others; emphasis on the relations of philosophy to the development of modern science, the social and political history of the Western world, and man's attempt to achieve a satisfactory world-view.

2043 Introductory Logic

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Study of the principles of valid argument: definition, deductive and inductive inference, fallacies.

2053 Business Ethics

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Critical examination of interrelated social and ethical issues that bear directly or indirectly on business as it is conducted in our society today. Designed primarily for business majors.

3013 Philosophy of Religion

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Examination of traditional religious beliefs and such concepts as faith and knowledge, mysticism and theology, existence and the nature of God, and the relation of religion to experience and social life.

3033 Philosophy of Science

(3-0) 3 hours credit. Prerequisite: PHI 2013 or PHI 2043 or the equivalent.

Examination of major issues in the philosophical foundations of the natural and social sciences, including scientific explanation, laws and theories, probability and induction, and the relation of scientific inquiry to the Western philosophical tradition.

3053 Philosophy of Art

(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.

Examination of major philosophical theories of art, beauty, and aesthetic judgment with emphasis on such problems as form and structure, communication in art, and meaning in aesthetic judgment.

3073 Oriental Philosophy

(3-0) 3 hours credit. Prerequisite: ENG 1023 or PHI 2013 or the equivalent.

Examination of the philosophical and religious traditions of the East, with emphasis on China, India, and Japan.

3213 Ethics

(3-0) 3 hours credit. Prerequisite: ENG 1023 or PHI 2013 or the equivalent.

Examination of ethical theory and of the nature and scope of ethical discourse with emphasis upon the concepts of the good, human happiness, self-realization, virtue, duty, responsibility, and the means-ends relationship; reading of selected classical and contemporary texts.

3223 Approaches to Knowledge and Reality

(3-0) 3 hours credit. Prerequisite: PHI 2013 or PHI 2043 or the equivalent.

Examination of the interrelations between theory of knowledge and theory of reality with emphasis on: the nature and scope of human knowledge, sensation and understanding, truth and error, change and causality, possibility and actuality, meaning and existence; reading and selected classical and contemporary texts.

3313 Contemporary Philosophy

(3-0) 3 hours credit. Prerequisite: PHI 2013 or PHI 2043 or the equivalent.

Offers the opportunity for an intensive study of one or more of the major branches of twentieth-century thought: analytic philosophy, phenomenology, existentialism, and process philosophy. May be repeated for credit when topics vary.

3343 Issues in Contemporary Philosophy

(3-0) 3 hours credit. Prerequisite: PHI 2013 or the equivalent.

In-depth study of contemporary works with focus on specific issues in one or more of the following areas: philosophy of language; philosophy of mind; logic; philosophy of religion; philosophy of science; epistemology; political philosophy; or ethics, including medical and legal ethics. May be repeated for credit when topics vary.

DIVISION OF FOREIGN LANGUAGES

The Division of Foreign Languages provides skills-development courses and courses leading to Bachelor of Arts degree programs in French, German, and Spanish and offers the opportunity for skills-development courses in other languages including Hebrew, Italian, Latin, and Russian. Skills-development courses facilitate speaking, reading, writing, and understanding the target language and assist students to use language as a tool in their major field of study and/or future profession as well as meet General Education Requirements. Course work in linguistics focuses on general concepts of structure and meaning in expression and relates linguistic development to other areas of human understanding. Courses in Comparative Studies in the Humanities relate literatures, literature and the other arts, and general themes of culture and humanistic thought. The majors in French, German, and Spanish are designed to offer the opportunity to broadly develop general knowledge of the culture, literature, and language in each of the respective areas. Support work for the major, chosen in consultation with the undergraduate advisor, provides the opportunity for students to broaden their perspectives in these areas. Through a careful selection of elective courses, students may combine their foreign language major with another language and/or with other areas in the Colleges of Fine Arts and Humanities, Business, Sciences and Engineering, or Social and Behavioral Sciences.

DIVISION HONORS

A student whose grade point average in courses taken at UTSA is at least 3.00 and whose grade point average in upper-division courses in one of the fields offered as a major in the Division is at least 3.50, and who has completed 18 hours at the upper-division in the major (24 hours in SPN), may petition the Undergraduate Advisor to work for Honors by being permitted to enroll in the appropriate Honors courses SPN, FRN, or GER 4993 Honors Research. Upon completion of the course, if grade point average minimums are still met, the Division Honors Committee will evaluate the project completed in the Honors course and determine whether the student will be awarded Honors in the Division.

BACHELOR OF ARTS DEGREE IN FRENCH

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 120.⁶

All candidates for the degree must complete:

- A. 24 semester hours in the *major*, all of which must be at the upper-division level, as follows:
 1. 9 semester hours of required courses:
 - FRN 3023 Advanced Composition and Conversation
 - FRN 3413 French Literature and Culture until 1700
 - FRN 3423 French Literature and Culture since 1700
 2. 15 additional semester hours in French to be chosen in consultation with the student's advisor.
- B. 12 semester hours of *support work*, as follows:
 1. 6 semester hours of required courses:
 - CSH 2313 Introduction to Literary Studies
 - LNG 3813 Introduction to Linguistics

⁶Thirty-nine of the total semester hours required for the degree must be at the upper-division level.

Students seeking teacher certification should consult the Undergraduate Certification Programs in Education brochure for information.

2. 6 additional semester hours outside the major in (1) another foreign language or (2) a related area including other literature, culture or linguistics courses to be chosen in consultation with student's advisor.
- C. 42 semester hours of *electives*.

COURSE DESCRIPTIONS

FRENCH (FRN)

1006 Elementary French-Accelerated

(4-4) 6 hours credit.

A one-semester course offering the student the opportunity for developing abilities in understanding, speaking, reading, and writing French. Equivalent to FRN 1013 and FRN 1023.

1013 Elementary French I

(2-2) 3 hours credit.

Fundamentals of French, aimed at offering the opportunity for developing abilities in understanding, speaking, reading, and writing.

1023 Elementary French II

(2-2) 3 hours credit. Prerequisite: FRN 1013 or the equivalent.

Fundamentals of French, aimed at offering the opportunity for developing abilities in understanding, speaking, reading, and writing.

2006 Intermediate French-Accelerated

(4-4) 6 hours credit. Prerequisite: FRN 1006 or 1023 or the equivalent.

A one-semester course offering the student continued opportunity for developing abilities in understanding, speaking, reading, and writing French. Includes grammar review and culture.

3013 French Phonetics and Pronunciation

(3-1) 3 hours credit. Prerequisite: FRN 2006 or 2023 or consent of instructor.

Articulatory description of the sounds of standard French. Exercises in sound discrimination, pronunciation, intonation, and phonetic transcription.

3023 Advanced Composition and Conversation

(3-0) 3 hours credit. Prerequisite: FRN 2006 or 2023 or consent of instructor.

Conversation correlated with readings, reports, and expository writing aimed at increasing oral and written fluency by vocabulary expansion and the active formation and use of grammatical sentences. May be repeated once for credit.

3033 Advanced Grammar and Stylistics

(3-0) 3 hours credit. Prerequisite: FRN 2006 or 2023 or consent of instructor.

A study of selected syntactic characteristics of the language such as subordination and the verb system. Grammatical and stylistic analysis of literary and non-literary language.

3053 French Business and Business Language

(3-0) 3 hours credit. Prerequisite: FRN 2006 or 2023 or consent of instructor.

Introduction to the basic context of the French economy and business world necessary to develop practical language skills to deal with matters such as commercial correspondence, documents, reports, telecommunications, and conferences. Attention to vocabulary and style specific to French business. Practice in translation on business-related topics.

3333 French Literature in English Translation

(3-0) 3 hours credit.

A study in English of major works of French literature. Themes, genres, movements. May not be applied to a major in French.

3413 French Literature and Culture until 1700

(3-0) 3 hours credit. Prerequisite: FRN 2006 or 2023 or consent of instructor.

Selections from French literature are studied as reflections and interpretations of central moments in French literary and cultural history until 1700. The course examines France's

literary heritage in relation to artistic, philosophical, social, political, and economic forces. Emphasis on poetry and drama.

3423 French Literature and Culture since 1700

(3-0) 3 hours credit. Prerequisite: FRN 2006 or 2023 or consent of instructor.

Selections from French literature are studied as reflections and interpretations of central moments in French literary and cultural history since 1700. The course examines France's literary heritage in relation to artistic, philosophical, social, political, and economic forces. Emphasis on poetry and the novel.

3613 Contemporary French Culture and Society

(3-0) 3 hours credit. Prerequisite: FRN 2006 or 2023 or consent of instructor.

Social, political, economic, and cultural aspects of contemporary France as seen mainly through essays and informational publications, newspaper and magazine articles, and radio and television broadcasts. Attention to current national and regional problems and conflicts.

4413 Genre Studies

(3-0) 3 hours credit. Prerequisite: An upper division French course or consent of instructor.

Study of the history, characteristics, and major achievements in a particular French literary genre: novel, short narrative, lyric, drama, or film. May be repeated for credit when topics vary.

4613 Periods and Schools of French Literature

(3-0) 3 hours credit. Prerequisite: An upper-division French course or consent of instructor.

Study of the major figures and the principal literary and cultural achievements of a single period: Middle Ages, Renaissance and Baroque, Classicism, Enlightenment, Nineteenth Century, La Belle Epoque, or Twentieth Century. May be repeated for credit when topics vary.

4913 Independent Study

3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, and the Division Director and Dean of the College in which the course is offered.

Independent reading, research, discussion and/or writing under the direction of a faculty member. May be repeated once for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4933 Internship in French

3 hours credit. Prerequisite: Permission of French Internship Coordinator.

Supervised experience in a setting which provides the opportunity to integrate theory and practice in language usage. May be repeated once for credit. A maximum of 6 credit hours may be earned through internships in French.

4953 Special Studies in French

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4993 Honors Research

(3-0) Prerequisite: Consent of the Undergraduate Advisor of Record.

Supervised research and preparation of an honors thesis. May be repeated once for credit, with approval. No more than six hours of FRN 4993 and FRN 4913 in combination may be applied to the major in French.

BACHELOR OF ARTS DEGREE IN GERMAN

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 120.⁷

All candidates for the degree must complete:

- A. 24 semester hours in the *major*, all of which must be at the upper-division level, as follows:
 1. 9 semester hours of required courses:
 - GER 3023 Advanced Composition and Conversation
 - GER 3413 German Literature and Culture I: Middle Ages to 1700
 - GER 3423 German Literature and Culture II: 1700 to the Present
 2. 15 additional semester hours are required in German, 6 of which must be at the 4000 level, exclusive of Independent Study.
- B. 12 semester hours of *support work*, as follows:
 1. CSH 2313 Introduction to Literary Studies
 - LNG 3813 Introduction to Linguistics
 2. CSH 1103 Literary Masterpieces of World Culture I
 - CSH 1113 Literary Masterpieces of World Culture II
- C. 42 semester hours of *electives*.

COURSE DESCRIPTIONS

GERMAN (GER)

1006 Elementary German-Accelerated

(4-4) 6 hours credit.

A one-semester course offering the student the opportunity for developing abilities in understanding, speaking, reading, and writing German. Equivalent to GER 1013 and GER 1023.

1013 Elementary German I

(2-2) 3 hours credit.

Fundamentals of German aimed at offering the opportunity for developing abilities in speaking, understanding, reading, and writing.

1023 Elementary German II

(2-2) 3 hours credit. Prerequisite: GER 1013 or the equivalent.

Fundamentals of German, aimed at offering the opportunity for developing abilities in speaking, understanding, reading, and writing.

2006 Intermediate German-Accelerated

(4-4) 6 hours credit.

A one-semester course offering the student continued opportunity for developing abilities in understanding, speaking, reading, and writing German. Includes grammar review and culture. Equivalent to GER 2013 and GER 2023.

2013 Intermediate German I

(2-2) 3 hours credit. Prerequisite: GER 1006 or 1023 or consent of instructor.

Continued practice in developing abilities in understanding, speaking, reading, and writing German. Review of German grammar and exposure to German culture.

2023 Intermediate German II

(2-2) 3 hours credit. Prerequisite: GER 2013 or the equivalent.

Continued practice in developing abilities in understanding, speaking, reading, and writing German. Review of German grammar and exposure to German culture.

⁷Thirty-nine of the total semester hours required for the degree must be at the upper-division level.

3023 Advanced Composition and Conversation

(3-0) 3 hours credit. Prerequisite: GER 2006 or 2023 or consent of instructor. Conversation correlated with readings, reports and expository writing, aimed at increasing oral and written fluency by vocabulary expansion and formation of grammatical sentences. Attention given to individual student's pronunciation, word choice, and syntax. Readings deal with contemporary social, political, intellectual, and artistic interests and issues. May be repeated once for credit when topics vary.

3053 Advanced German Grammar and Stylistics

(3-0) 3 hours credit. Prerequisite: GER 3023 or consent of instructor. A study of selected syntactic characteristics of the language with special attention to grammatical categories, subordination, and verb systems, including verbal aspects. May be repeated once for credit when topics vary.

3333 German Literature In English Translation

(3-0) 3 hours credit. Major works of German literature. Themes, genres, and movements. May not be applied to a major in German.

3413 German Literature and Culture I: Middle Ages to 1700

(3-0) 3 hours credit. Prerequisite: GER 2006 or 2023 or consent of instructor. Selected works from the medieval period to 1700 are studied as examples of central moments in German culture and literary history. The course presents the shape of German civilization, emphasizing the major literary periods, styles, movements, and generations.

3423 German Literature and Culture II: 1700 to the Present

(3-0) 3 hours credit. Prerequisite: GER 2006 or 2023 or consent of instructor. Selected works from 1700 to the present area are studied as examples of central moments in German culture and literary history. The course presents the shape of German civilization, emphasizing the major literary periods, styles, movements, and generations.

4003 Topics in Periods of German Literature and Culture

(3-0) 3 hours credit. Prerequisite: GER 3413 or 3423 or consent of instructor. Focus on a selected period of German literature and culture such as Medieval, Renaissance and Reformation, Baroque, 18th Century, 19th Century. Selected works are studied as examples of representative moments in German culture and literary history. May be repeated for credit when topics vary.

4013 Genre Studies

(3-0) 3 hours credit. Prerequisite: GER 3413 or GER 3423 or consent of instructor. Study of a single genre or sub-genre in German culture such as lyric, drama, novel, and film. May be repeated for credit when topics vary.

4133 Major German Authors

(3-0) 3 hours credit. Prerequisite: GER 3413 or GER 3423 or consent of instructor. Study of one or several German literary or intellectual figures, such as Luther, Goethe, Nietzsche, Brecht. May be repeated for credit when topics vary.

4213 German Studies

(3-0) 3 hours credit. Prerequisite: GER 3413 or GER 3423 or consent of instructor. Course focuses on selected topics of literary and cultural history such as the rise of aesthetic theory in the eighteenth century, Vienna 1890-1914, Expressionism in literature and the plastic arts. May be repeated for credit when topics vary.

4333 Studies in German Linguistics

(3-0) 3 hours credit. Prerequisite: GER 2006 or 2023 or consent of instructor. Focus on a selected topic of linguistics. May be repeated for credit when topics vary.

4913 Independent Study

3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, and the Division Director and Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4953 Special Studies in German

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4993 Honors Research

(3-0) Prerequisite: Consent of the Undergraduate Advisor of Record.

Supervised research and preparation of an honors thesis. May be repeated once for credit, with approval. No more than six hours of GER 4993 and GER 4913 in combination may be applied to the major in German.

BACHELOR OF ARTS DEGREE IN SPANISH

The minimum number of semester hours required for this degree, including 42 hours of General Education Requirements, is 120.⁸

All candidates for the degree must complete:

- A. 33 semester hours in the *major*, all of which must be at the upper-division level, as follows:
 1. 9 semester hours of required courses:
 - SPN 3033 Advanced Conversation
 - SPN 3043 Advanced Reading
 - SPN 3063 Advanced Grammar and Composition
 2. 9 semester hours consisting of one course from each of the three following two-course groupings:
 - SPN 3113 Introduction to Spanish Linguistics
or
SPN 3123 Applied Spanish Linguistics
 - SPN 3413 Spanish Literature to 1700
or
SPN 3423 Spanish Literature since 1700
 - SPN 3463 Spanish-American Literature to Modernism
or
SPN 3473 Spanish-American Literature since Modernism
 3. 6 semester hours as follows:
 - SPN 3613 Spanish Culture and Civilization
 - SPN 3623 Spanish-American Culture and Civilization
 4. 9 semester hours, 3 of which must be at the 4000 level, and may not include Independent Study.
- B. 9 additional semester hours of course work not taught in Spanish in a single area or in combined areas from among the following: literature, culture, linguistics, or another foreign language to be chosen in consultation with the Undergraduate Advisor.
- C. 36 semester hours of *electives*.

⁸Thirty-nine of the total semester hours required for the degree must be at the upper-division level.

Students seeking teacher certification should consult the Undergraduate Certification Programs in Education brochure for information.

COURSE DESCRIPTIONS

SPANISH (SPN)

1006 Elementary Spanish-Accelerated

(4-4) 6 hours credit.

A one-semester course offering the student the opportunity for developing abilities in understanding, speaking, reading, and writing Spanish. Equivalent to SPN 1013 and SPN 1023. Emphasis on understanding and speaking.

1013 Elementary Spanish I

(2-2) 3 hours credit.

Fundamentals of Spanish, offering the opportunity for developing abilities in understanding, speaking, reading, and writing. Emphasis on understanding and speaking.

1023 Elementary Spanish II

(2-2) 3 hours credit. Prerequisite: SPN 1013 or the equivalent.

Fundamentals of Spanish, offering the opportunity for developing abilities in understanding, speaking, reading, and writing. Emphasis on understanding and speaking.

2006 Intermediate Spanish-Accelerated

(4-4) 6 hours credit. Prerequisite: SPN 1006 or 1023 or the equivalent.

A one-semester course offering the student continued opportunity for developing abilities in understanding, speaking, reading, and writing Spanish. Includes grammar review and culture. Equivalent to SPN 2013 and SPN 2023.

2013 Intermediate Spanish I

(2-2) 3 hours credit. Prerequisite: SPN 1006 or 1023 or the equivalent.

Continued practice in developing abilities in understanding, speaking, reading, and writing Spanish. Review of Spanish grammar and exposure to Hispanic culture.

2023 Intermediate Spanish II

(2-2) 3 hours credit. Prerequisite: SPN 2013 or the equivalent.

Continued practice in developing abilities in understanding, speaking, reading, and writing Spanish. Review of Spanish grammar and exposure to Hispanic culture.

2103 Intermediate Conversation and Composition

(3-0) 3 hours credit. Prerequisite: SPN 2023 or the equivalent.

Emphasis on extended development of the speaking and writing skills, especially for those students not yet at the Advanced Proficiency Level (Level 2 on the ACTFL-ETS proficiency scale). Intensive vocabulary expansion for a variety of situations and topics.

2513 Spanish for Special Purposes

(3-1) 3 hours credit. Prerequisite: SPN 1006 or 1023 or consent of instructor.

Foreign language skills relevant to the following areas: business, health care, law, education, science, technology. May be repeated for credit when topics vary.

3013 Spanish Phonetics and Pronunciation

(3-1) 3 hours credit. Prerequisite: SPN 2006 or 2023 or consent of instructor.

Offers the opportunity for intensive patterned pronunciation drill and exercises in sound discrimination and transcription, based on detailed articulatory description of various dialects of Spanish.

3033 Advanced Conversation

(3-0) 3 hours credit. Prerequisite: SPN 2103 or a "2" on the Oral Proficiency Interview Test.

Offers the opportunity for further development of the speaking skill through oral activities directed at the Advanced and Superior Level (Levels 2 and 3 on the ACTFL-ETS proficiency scale). May be repeated up to a maximum of 6 hours or the achievement of a "3" on the Oral Proficiency Interview Test.

3043 Advanced Reading

(3-0) 3 hours credit. Prerequisite: SPN 2103.

Opportunity to develop speed and comprehension in the reading of superior level texts in a variety of disciplines through intensive and continued practice.

3063 Advanced Grammar and Composition

(3-0) 3 hours credit. Prerequisite: SPN 2103.

Offers the opportunity for further development of the writing skill through activities directed at the Advanced and Superior Levels (Levels 2 and 3 on the ACTFLETS proficiency scale). Selected grammar review and beginning awareness of style, levels, and usage and differences between written and spoken language. Credit cannot be earned for 3063 and both 3023 and 3133.

3113 Introduction to Spanish Linguistics

(3-0) 3 hours credit. Prerequisite: SPN 3063 or 2023 or consent of instructor.

Offers the opportunity for application to Spanish of the basic principles of analysis and description of language structure. Attention given to structural regularities at the levels of sound, word formation, and syntax; also to the relationship between some irregularities and historical change and to dialectal variation.

3123 Applied Spanish Linguistics

(3-0) 3 hours credit. Prerequisite: SPN 3063 or consent of instructor.

Practical application of linguistic principles to the teaching of Spanish. Attention given to problems involved with the contrast between the structures of Spanish and English.

3153 Spanish for the Business/Management Fields

(3-0) 3 hours credit. Prerequisite: SPN 2103 or consent of instructor.

Foreign language skills relevant to careers in business fields. Emphasis on reading skills and simple conversations on business topics. Exposure to terminology from contracts, financial statements, business law, marketing, banking, etc. Intended for students with some background in Spanish. May be repeated once for credit when topics vary.

3333 Hispanic Literature in English Translation

(3-0) 3 hours credit.

Major works in Hispanic literatures: themes, genres, movements. May not be applied to a major in Spanish.

3413 Spanish Literature to 1700

(3-0) 3 hours credit. Prerequisite: SPN 3043.

The literature of Spain from the Middle Ages to 1700. Readings of selections and complete works. Practice in critical analysis through papers and examinations.

3423 Spanish Literature Since 1700

(3-0) 3 hours credit. Prerequisite: SPN 3043.

The literature of Spain from 1700 to the present. Reading of selections and complete works. Practice in critical analysis through papers and examinations.

3463 Spanish-American Literature to Modernism

(3-0) 3 hours credit. Prerequisite: SPN 3043.

The literature of Spanish America, from Pre-Columbian times to Modernism. Readings of selections and complete works. Practice in critical analysis through papers and examinations.

3473 Spanish-American Literature Since Modernism

(3-0) 3 hours credit. Prerequisite: SPN 3043.

The literature of Spanish America from Modernism to the present. Readings of selections and complete works. Practice in critical analysis through papers and examinations.

3493 Mexican-American Literature

(3-0) 3 hours credit. Prerequisite: SPN 3043.

Readings and discussion of works by Mexican-American writers. The expression through poetry, the novel, the short story and the theater of the Mexican-American cultural experience as well as universal themes and literary concerns. Selections from popular literature including the oral tradition. May be repeated for credit when topics vary.

3613 Spanish Culture and Civilization

(3-0) 3 hours credit. Prerequisite: SPN 3043.

Emergence of the Spanish peoples from pre-Roman times to the present. The reflection in literature of cultural traditions, myths, values, and life-view.

3623 Spanish-American Culture and Civilization

(3-0) 3 hours credit. Prerequisite: SPN 3043.

The cultural life of the respective geographic regions and social strata of Spanish America from before the Conquest to the present as reflected in and interpreted by its literature and arts.

3653 Contemporary Spain

(3-0) 3 hours credit. Prerequisite: SPN 3043.

Problems and conflicts determining the cultural development of contemporary Spain. Social, political, economic and cultural characteristics as seen through intellectual currents and the role of intellectual leaders in forming Spain's cultural expression.

3663 Contemporary Spanish America

(3-0) 3 hours credit. Prerequisite: SPN 3043.

Problems and conflicts determining the cultural development of contemporary Spanish America. Ethnic, social, political, economic, and cultural characteristics. Intellectual currents and the role of the intellectual leaders in forming the cultural expression of Spanish America.

3673 Hispanic Cultural Systems

(3-0) 3 hours credit. Prerequisite: SPN 3043.

Aspects of everyday culture which affect interaction with native speakers of Spanish in the Hispanic world. Social norms, language styles, cultural patterns of social interaction. Practice in using appropriate behavior and language in culturally complex situations.

4123 The Spanish of The Mexican American

(3-0) 3 hours credit. Prerequisite: SPN 3113 or consent of instructor.

A description of the Spanish language as used by Mexican Americans. Particular attention placed on its historical ties with other Hispanic dialects, including other varieties spoken in the United States.

4213 Classic Spanish Literature

(3-0) 3 hours credit. Prerequisite: An upper-division course in literature in Spanish or consent of instructor.

An intensive study of the literature of Spain from either the Medieval or Golden Age period. May be repeated when topics vary.

4223 Twentieth Century Spanish Literature

(3-0) 3 hours credit. Prerequisite: An upper-division course in literature in Spanish or consent of instructor.

Spanish literature from the Generation of 1898 to the present. May be repeated for credit when topics vary.

4233 Nineteenth Century Spanish-American Literature

(3-0) 3 hours credit. Prerequisite: An upper-division course in literature in Spanish or consent of instructor.

An intensive study of Spanish-American literature from its eighteenth century ideological and vital roots through the Modernist movement. May be repeated when topics vary.

4243 Twentieth Century Spanish-American Literature

(3-0) 3 hours credit. Prerequisite: An upper-division course in literature in Spanish or consent of instructor.

An intensive study of Spanish-American prose, poetry and/or drama from Modernism to the present day. May be repeated when topics vary.

4323 Cervantes' *Don Quijote*

(3-0) 3 hours credit. Prerequisite: An upper-division course in literature in Spanish or consent of instructor.

A reading of *Don Quijote*; analysis of the novel's structure and themes with special consideration of its stylistic patterns, ideological framework, and symbolic meanings.

4483 National Literatures of Spanish America

(3-0) 3 hours credit. Prerequisite: An upper-division course in literature in Spanish or consent of instructor.

Representative works from the national literatures of Spanish America. May be repeated for credit when topics vary.

4913 Independent Study

3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student's advisor, and the Division Director and Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4933 Internship in Spanish

(3-0) 3 hours credit. Prerequisite: Permission of Division Director.

Supervised experience in a setting which provides the opportunity to integrate theory and practice in language usage. A maximum of 6 credit hours may be earned through internships.

4953 Special Studies in Spanish

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4993 Honors Research

(3-0) Prerequisite: Consent of the Undergraduate Advisor of Record.

Supervised research and preparation of an honors thesis. May be repeated once for credit with approval. No more than six hours of SPN 4993 and SPN 4913 in combination may be applied to the major in Spanish.

COURSE DESCRIPTIONS
COMPARATIVE STUDIES IN THE HUMANITIES
(CSH)

1103 Literary Masterpieces of World Culture I

(3-0) 3 hours credit.

Representative masterworks of world literature in translation. An examination of major texts from antiquity to the Renaissance which have shaped and expressed our cultural traditions. Situation of literary works in the context of the development of civilization.

1113 Literary Masterpieces of World Culture II

(3-0) 3 hours credit.

Representative masterworks of world literature in translation. An examination of major texts from Renaissance to the present which have shaped and expressed our cultural traditions. Situation of literary works in the context of the development of civilization.

1203 Introduction to Hispanic Cultures

(3-0) 3 hours credit.

An overview of the cultures of Spain, Spanish America, and Hispanic groups in the United States as revealed through their literatures and other forms of expression. Exploration of the unifying and diversifying elements in Hispanic Civilization from its beginnings. All readings from English language or translated materials. May not be applied to the major in Spanish.

1213 Topics in World Cultures

(3-0) 3 hours credit.

Introductory overview of a specific culture or cultural area as revealed through the diversity of its heritage. Includes topics such as: Hispanic, Francophone, German, Slavic, Judaic, Latin, Oriental, or African culture. All readings from English language or translated materials. May be repeated for credit when topics vary, but not more than 6 hours will apply to bachelor's degree.

2113 The Foreign Film

(3-0) 3 hours credit.

An introduction to film as art and as cultural expression. Emphasis on cinematic techniques, national traditions, genres, and the distinctive features of film as a humanistic medium. May be repeated for credit when topics vary.

144 / Foreign Languages

Hebrew

Italian

2313 Introduction to Literary Studies

(3-0) 3 hours credit. Prerequisite: ENG 1023 or equivalent.

Offers the opportunity for development of an awareness of literature and the skills with which to approach and understand it. Examination of the particularities of individual national traditions and of the interrelationship of all literary traditions. Emphasis on the nature of genre, period, and style. (Formerly CSH 3313. Credit cannot be earned for both 2313 and 3313.)

3713 Topics in Twentieth-Century Comparative Studies

(3-0) 3 hours credit.

Topics chosen from among authors, genres, themes, and movements of the twentieth century and studied from a perspective transcending national and linguistic boundaries.

COURSE DESCRIPTIONS

FOREIGN LANGUAGES

(FL)

2013 Introduction to Translation

(3-0) 3 hours credit. Prerequisite: at least two semesters of a single foreign language.

Principles of translation, with practice in translating short documents of a general nature.

3013 Translation for The Language Specialist

(3-0) 3 hours credit. Prerequisite: At least one course at the 3000 level in the selected foreign language.

The linguistic and cultural issues involved in the act of translation. Practice in translating documents from selected professional areas: business, health care, law, technology, or the arts. May be repeated for credit when topics vary.

4243 Second and Foreign Language Instruction

(3-0) 3 hours credit. Prerequisite: Completion of the General Education Requirements in foreign language or culture.

A study of second language teaching and learning theories. Emphasis on instruction as it relates to second languages and cultures.

COURSE DESCRIPTIONS

HEBREW

(HBR)

1013 Elementary Hebrew I

(2-2) 3 hours credit.

Fundamentals of Hebrew aimed at offering the opportunity for developing abilities in speaking, understanding, reading, and writing.

3333 Hebrew Literature in English Translation

(3-0) 3 hours credit.

Major works of Hebrew literature: themes, genres, movements.

COURSE DESCRIPTIONS

ITALIAN

(ITL)

1013 Elementary Italian I

(2-2) 3 hours credit.

Fundamentals of Italian aimed at offering the opportunity for developing abilities in speaking, understanding, reading, and writing.

1023 Elementary Italian II

(2-2) 3 hours credit. Prerequisite: ITL 1013 or the equivalent.

Fundamentals of Italian aimed at offering the opportunity for developing abilities in speaking, understanding, reading, and writing.

- 3333 Italian Literature in English Translation**
(3-0) 3 hours credit.
Major works of Italian literature: themes, genres, movements.

COURSE DESCRIPTIONS

LATIN (LAT)

- 1013 Elementary Latin I**
(3-1) 3 hours credit
Fundamentals of Latin grammar and readings in Latin.
- 1023 Elementary Latin II**
(3-1) 3 hours credit. Prerequisite: LAT 1013.
Fundamentals of Latin grammar and readings in Latin.

COURSE DESCRIPTIONS

LINGUISTICS (LNG)

- 3813 Introduction to Linguistics**
(3-0) 3 hours credit.
Basic principles of analysis and description of the structure of language. Attention given to the various levels: sound, syntax, and semantics.
- 3833 Sociology of Language**
(3-0) 3 hours credit.
Societal patterns regarding language variation and their implications for language maintenance and shift. Degree of mutual interrelations between language and culture. The study of language in its social context. Language variation and linguistic change.
- 3913 Topics in Linguistic Theory**
(3-0) 3 hours credit.
Focus on recent developments in linguistic theory. Topics may include current approaches to phonology, syntax, semantics, and pragmatics. May be repeated for credit when topics vary.

COURSE DESCRIPTIONS

RUSSIAN (RUS)

- 1013 Elementary Russian I**
(2-2) 3 hours credit.
Fundamentals of Russian, aimed at offering the opportunity for developing abilities in speaking, understanding, reading, and writing.
- 1023 Elementary Russian II**
(2-2) 3 hours credit. Prerequisite: RUS 1013 or the equivalent.
Fundamentals of Russian, aimed at offering the opportunity for developing abilities in speaking, understanding, reading, and writing.
- 3333 Russian Literature in English Translation**
(3-0) 3 hours credit.
Major works of Russian literature: themes, genres, movements.

DIVISION OF MUSIC

The Division of Music is authorized to award a Bachelor of Music Degree and a Bachelor of Music Education Degree. Both of these degrees are fully accredited by the National Association of Schools of Music. Students may select one of three emphases in the Bachelor of Music program: music performance, music theory-composition, or music marketing. Students may select one of three emphases in the Bachelor of Music Education program: secondary choral, all-level choral, or all-level instrumental.

Diagnostic examinations in music theory and music history are given to music majors entering UTSA for the first time. These examinations are given at the beginning of each semester and are used as an aid in counseling.

Auditions are required of all music majors for placement into ensembles.

A student may be awarded Honors in Music in special recognition of outstanding achievement in his or her area of specialization. To qualify for the award, the student must (1) have an overall university GPA of at least 3.0 and a GPA of at least 3.5 in music courses; and (2) successfully complete MUS 4983, Honors Seminar, including a lecture or lecture-recital appearance in which Seminar research is presented.

BACHELOR OF MUSIC DEGREE

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 128, in all except the music marketing emphasis, where it is 135.

All candidates for the Bachelor of Music degree, regardless of emphasis, must complete the following 32 semester hours of required music courses:

- MUS 1102 Aural Skills I
- MUS 1112 Basic Skills of Music I
- MUS 1122 Aural Skills II
- MUS 1132 Basic Skills of Music II
- MUS 1251 Basic Repertoire
- MUS 2102 Aural Skills III
- MUS 2112 Aural Skills IV
- MUS 2152 Basic Skills of Music III
- MUS 2162 Basic Skills of Music IV
- MUS 2253 Introduction to Music Literature
- MUS 2403 Conducting I
- MUS 3113 Analysis I
- MUS 3213 Music in Western Civilization I
- MUS 3223 Music in Western Civilization II

Special degree requirements. All students pursuing the Bachelor of Music degree are required (a) to make one recital appearance during the last semester of required study on their principal instrument; (b) to perform in an assigned university ensemble each semester that a student is enrolled in courses as a music major (each student must enroll in an ensemble a minimum of eight semesters, excepting the term of enrollment in student teaching; specific requirements for degree emphases are outlined in the Division of Music Student Handbook); (c) to meet music performance proficiency standards established for principal instruments (students not meeting those standards must repeat music performance courses until the proficiency standards have been met); (d) to register in MUS 2001 Concert Music each semester in residence as a full-time student. Performance majors are required to make a minimum of one recital appearance each semester on their principal instrument. Students who specify classical guitar as their principal instrument must pass a Classical Guitar Listening Examination.

Details regarding this requirement are available in the Division of Music Student Handbook.

In addition, a candidate for the Bachelor of Music degree must complete the course requirements for the emphasis declared by the candidate.

MUSIC PERFORMANCE EMPHASIS

- A. 28 semester hours of music performance are required from the following courses some of which may be repeated for credit to fulfill the 28-hour requirement. Students must satisfy either the Keyboard Principal Instrument requirements or the Non-Keyboard Principal Instrument requirements.

Keyboard Principal Instrument:

Principal Instrument:

- MUS 1542 Music Performance-Private Instruction I (2 semesters)
- MUS 2542 Music Performance-Private Instruction II (2 semesters)
- MUS 3543 Music Performance-Private Instruction IV (2 semesters)
- MUS 4544 Music Performance-Private Instruction V (2 semesters)

Secondary Instrument(s):

- MUS 1552 Functional Piano for Keyboard Principals

Two semester hours from the following:

- MUS 1511 Music Performance-Secondary Instrument
- MUS 1531 Class Voice
- MUS 1542 Music Performance-Private Instruction I

Non-Keyboard Principal Instrument:

Principal Instrument:

- MUS 1542 Music Performance-Private Instruction I (2 semesters)
- MUS 2542 Music Performance-Private Instruction II (2 semesters)
- MUS 3543 Music Performance-Private Instruction IV (2 semesters)
- MUS 4544 Music Performance-Private Instruction V (2 semesters)

Secondary Instrument(s):

- MUS 1532 Functional Piano for Non-Keyboard Principals

Two semester hours from the following:

- MUS 1511 Music Performance-Secondary Instrument
- MUS 1522 Class Piano
- MUS 1531 Class Voice
- MUS 1542 Music Performance-Private Instruction I

- B. 6 semester hours of music theory are required and may be fulfilled by selecting from the following courses:

- MUS 3133 Analysis II
- MUS 3143 Orchestration
- MUS 4113 Counterpoint

(Exception: a student whose principal instrument is an orchestral instrument is required to take MUS 3143 Orchestration.)

- C. 4 semester hours of music literature (MUS 3252) are required. Topics may include:

Advanced Studies in Music Literature and Analysis

Vocal Literature required of voice principals.

History and Literature of the Guitar required of classical guitar principals.

Literature of the Pianoforte required of piano principals.

Organ Literature required of organ principals.

Orchestral Literature or Wind Literature required of instrumental principals.

- D. Piano principals are required to complete 4 semester hours of accompanying. MUS 2501 Accompanying may be repeated for credit to fulfill this requirement.
- E. All music performance majors are required to complete 2 semester hours of MUS 4532 Music Pedagogy.
- F. Voice principals are required to complete 4 semester hours of diction. MUS 3501 Diction for Singers and Conductors may be repeated for credit to fulfill this requirement.
- G. Free electives are required depending upon principal instrument: 11 semester hours for piano principals, 11 semester hours for voice principals, 15 semester hours for other music performance principals.
- H. A qualifying recital of approximately 30 minutes in length must be presented and approved by the appropriate Qualifying Recital Committee before the student can be approved as a major in music performance at the upper-division level. A senior recital of approximately one hour in length must be presented and approved by the appropriate Recital Committee.

MUSIC THEORY-COMPOSITION EMPHASIS

- A. 16 semester hours of music performance courses are required from the following courses some of which may be repeated for credit to fulfill the 16-hour requirement. Students must satisfy either the Keyboard Principal Instrument requirements or the Non-Keyboard Principal Instrument requirements.

Keyboard Principal Instrument:

Principal Instrument:

MUS 1542 Music Performance-Private Instruction I (2 semesters)

MUS 2542 Music Performance-Private Instruction II (2 semesters)

MUS 3532 Music Performance-Private Instruction III (2 semesters)

Secondary Instrument(s):

MUS 1552 Functional Piano for Keyboard Principals

Two semester hours from the following:

MUS 1511 Music Performance-Secondary Instrument

MUS 1531 Class Voice

MUS 1542 Music Performance-Private Instruction I

Non-Keyboard Principal Instrument:

Principal Instrument:

MUS 1542 Music Performance-Private Instruction I (2 semesters)

MUS 2542 Music Performance-Private Instruction II (2 semesters)

MUS 3532 Music Performance-Private Instruction III (2 semesters)

Secondary Instrument(s):

MUS 1532 Functional Piano for Non-Keyboard Principals

Two semester hours from the following:

MUS 1511 Music Performance-Secondary Instrument

MUS 1522 Class Piano

MUS 1531 Class Voice

MUS 1542 Music Performance-Private Instruction I

- B. 18 additional semester hours of music theory and composition are required. This requirement must be fulfilled by completing each of the following courses:

- MUS 2142 Composition I
 - MUS 3133 Analysis II
 - MUS 3143 Orchestration
 - MUS 3162 Composition II
 - MUS 3313 Microcomputer Programming Applications in Music and Music Business
 - MUS 4113 Counterpoint
 - MUS 4142 Composition III
- C. 4 semester hours of MUS 3252 Advanced Studies in Music Literature and Analysis are required in the following topics: Music Since 1950 and Advanced Analytical Techniques.
- D. 3 semester hours of MUS 3123 Introduction to Electronic Music.
- E. 12 semester hours of electives.
- F. Students electing the theory-composition emphasis must interview with the Theory-Composition Committee for approval to pursue the theory-composition emphasis at the upper-division level. MUS 4561 Senior Recital is required of all students in the theory-composition emphasis.
- G. The student's Senior Recital (MUS 4561) shall include a selection of the student's compositions totaling a minimum of 20 minutes. The student will submit completed scores representing a majority of the proposed recital program to an examining committee the semester prior to that of the recital.
- The examining committee shall determine the acceptability of the recital program.

MUSIC MARKETING EMPHASIS

- A. 16 semester hours of music performance courses are required from the following courses some of which may be repeated for credit to fulfill the 16-hour requirement. Students must satisfy either the Keyboard Principal Instrument requirements or the Non-Keyboard Principal Instrument requirements.
- Keyboard Principal Instrument:
- Principal Instrument:*
- MUS 1542 Music Performance-Private Instruction I (2 semesters)
 - MUS 2542 Music Performance-Private Instruction II (2 semesters)
 - MUS 3532 Music Performance-Private Instruction III (2 semesters)
- Secondary Instrument(s):*
- MUS 1552 Functional Piano for Keyboard Principals
- Two semester hours from the following:
- MUS 1511 Music Performance-Secondary Instrument
 - MUS 1531 Class Voice
 - MUS 1542 Music Performance-Private Instruction I
- Non-Keyboard Principal Instrument:
- Principal Instrument:*
- MUS 1542 Music Performance-Private Instruction I (2 semesters)
 - MUS 2542 Music Performance-Private Instruction II (2 semesters)
 - MUS 3532 Music Performance-Private Instruction III (2 semesters)
- Secondary Instrument(s):*
- MUS 1532 Functional Piano for Non-Keyboard Principals

Two semester hours from the following:

- MUS 1511 Music Performance-Secondary Instrument
- MUS 1522 Class Piano
- MUS 1531 Class Voice
- MUS 1542 Music Performance-Private Instruction I

B. 6 semester hours in the following:

- MUS 3613 Music in Contemporary Life
- MUS 4953 Special Studies in Music (when the topic is Seminar in Music Marketing)

C. 33 hours of support work are required. This requirement may be fulfilled by completing the following:

- ACC 2013 Accounting Principles I
- ACC 2033 Accounting Principles II
- BLW 3013 Business Law
- CS 1043 Computer Programming for Business Applications
- ECO 2013 Introductory Macroeconomics
- ECO 2023 Introductory Microeconomics
- FIN 3013 The Finance Function
- MGT 3013 Introduction to Organization Theory, Behavior, and Management
- MGT 3023 Organizational Behavior
- MKT 3013 Principles of Marketing
- MKT 4933 Internship in Marketing

D. 6 additional hours of music or music marketing are required. This may be fulfilled by selecting from the following:

- MUS 3313 Microcomputer Applications in Music and Music Business
- MUS 4953 Special Studies in Music (Music Marketing topic)
- or
- MUS 4803 Seminar in Music Marketing
- MKT 3113 Retailing
- MKT 4093 Consumer Behavior
- MKT 4103 Current Topics in Marketing

E. Students selecting the music marketing emphasis must interview with the Music Marketing Committee for approval to pursue the music marketing emphasis at the upper-division level.

BACHELOR OF MUSIC EDUCATION DEGREE

The minimum number of semester hours required for this degree, including the UTSA General Education Requirements, and the Texas Education Agency Certification requirements, is 133.⁹

All candidates for the Bachelor of Music Education Degree, regardless of emphasis, must complete the following 32 semester hours of required music courses:

- MUS 1102 Aural Skills I
- MUS 1112 Basic Skills of Music I
- MUS 1122 Aural Skills II
- MUS 1132 Basic Skills of Music II
- MUS 1251 Basic Repertoire

⁹Thirty-nine of the total semester hours required for the degree must be at the upper-division level. 30 semester hours of music courses must be at the upper-division level.

Students entering the Bachelor of Music Education Program may be required to satisfy additional requirements as prescribed by the Texas Education Agency. Students are advised to consult the Undergraduate Certification Programs in Education brochure.

- MUS 2102 Aural Skills III
- MUS 2112 Aural Skills IV
- MUS 2152 Basic Skills of Music III
- MUS 2162 Basic Skills of Music IV
- MUS 2253 Introduction to Music Literature
- MUS 2403 Conducting I
- MUS 3113 Analysis I
- MUS 3213 Music in Western Civilization I
- MUS 3223 Music in Western Civilization II

In addition, all candidates for the Bachelor of Music Education degree, regardless of emphasis, must complete the following 12 hours of private instruction in a principal instrument:

- MUS 1542 Music Performance-Private Instruction I (2 semesters)
- MUS 2542 Music Performance-Private Instruction II (2 semesters)
- MUS 3532 Music Performance-Private Instruction III (2 semesters)

Special degree requirements. All students pursuing the Bachelor of Music Education degree are required (a) to make one recital appearance during the last semester of required study on their principal instrument; (b) to perform in an assigned university ensemble each semester that a student is enrolled in courses as a music major (each student must enroll in an ensemble a minimum of eight semesters, excepting the term of enrollment in student teaching; specific requirements for degree emphases are outlined in the Division of Music Student Handbook); (c) to meet music performance proficiency standards established for principal instruments (students not meeting those standards must repeat music performance courses until the proficiency standards have been met); (d) to register in MUS 2001 Concert Music each semester in residence as a full-time student; (e) to interview with the Music Education Committee for approval as a music education major at the upper-division level; (f) to successfully complete competency tests related to certification as specified by the Texas Education Agency. Students who specify classical guitar as their principal instrument must pass a Classical Guitar Listening Examination. Details regarding this requirement are available in the Division of Music Student Handbook.

SECONDARY CHORAL EMPHASIS (Grades 6-12)

- A. 19 semester hours in music.
 - 1. 15 semester hours of music education courses:
 - MUS 2413 Conducting II: Secondary Schools
 - MUS 3252 Advanced Studies in Music Literature and Analysis (Choral Literature topic)
 - MUS 3413 Introduction to Music Education
 - MUS 3463 General Music in the Junior High School
 - MUS 3501 Diction for Singers and Conductors: Survey
 - MUS 3543 Private Instruction Conducting
 - 2. 4 semester hours of additional music performance study:
 - MUS 1532 Functional Piano for Non-Keyboard Principals
or
 - MUS 1552 Functional Piano for Keyboard Principals
 - MUS 4532 Music Pedagogy (Vocal Pedagogy topic)

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B. 24 semester hours in professional education courses (including 9 hours of student teaching):

- C&I 3003 The Secondary School Curriculum
- EDP 3003 Introduction to Educational Psychology
- EDU 3003 Educational Sociology
- EDU 3013 The School Environment and Learning Resources
- EDU 4049 Student Teaching: Secondary or
- EDU 4059 Student Teaching: Secondary ESL
- EDU 4093 Teaching in the Secondary School

ALL-LEVEL CHORAL EMPHASIS (Grades K-12)

A. 19 semester hours in music.

1. 15 semester hours of music education courses:

- MUS 2413 Conducting II: Secondary Schools
- MUS 3252 Advanced Studies in Music Literature and Analysis (Choral Literature topic)
- MUS 3413 Introduction to Music Education
- MUS 3463 General Music in the Junior High School
- MUS 3501 Diction for Singers and Conductors: Survey
- MUS 4423 Music in the Elementary School

2. 4 semester hours of additional music performance study:

- MUS 1532 Functional Piano for Non-Keyboard Principals
or
- MUS 1552 Functional Piano for Keyboard Principals
- MUS 4532 Music Pedagogy (Vocal Pedagogy topic)

B. 24 semester hours in professional education courses (including 9 hours of student teaching):

- C&I 3003 The Secondary School Curriculum
- EDP 3003 Introduction to Educational Psychology
- EDU 3003 Educational Sociology
- EDU 3013 The School Environment and Learning Resources
- EDU 4013 Classroom Climate in the Elementary School
- EDU 4069 Student Teaching: All-Level

ALL-LEVEL INSTRUMENTAL EMPHASIS (Grades K-12)

A. 19 semester hours in music.

1. 15 semester hours of music education courses:

- MUS 2413 Conducting II: Secondary Schools
- MUS 3252 Advanced Studies in Music Literature and Analysis (Wind Literature topic)
- MUS 3401 Brass Techniques: Elementary School
- MUS 3413 Introduction to Music Education
- MUS 3451 Woodwind Techniques: Elementary School
- MUS 3471 String Techniques: Elementary School
- MUS 3481 Percussion Techniques: Elementary School
- MUS 3463 General Music in the Junior High School
or
- MUS 4453 Marching Band Techniques

2. 4 semester hours of additional music performance study:
MUS 1532 Functional Piano for Non-Keyboard Principals
MUS 4532 Music Pedagogy (Instrumental Ensemble Pedagogy topic)
- B. 24 semester hours in professional education courses (including 9 hours of student teaching):
C&I 3003 The Secondary School Curriculum
EDP 3003 Introduction to Educational Psychology
EDU 3003 Educational Sociology
EDU 3013 The School Environment and Learning Resources
EDU 4013 Classroom Climate in the Elementary School
EDU 4069 Student Teaching: All-Level

COURSE DESCRIPTIONS

MUSIC (MUS)

- 1102 Aural Skills I**
(2-1) 2 hours credit.
Offers the opportunity for training in sight singing, aural skills, and keyboard application. Should be taken concurrently with MUS 1112.
- 1112 Basic Skills of Music I**
(2-0) 2 hours credit.
A survey of fundamentals and concepts of music. Emphasis on rudiments and melody with an introduction to harmony. Materials from a variety of style periods are studied. Should be taken concurrently with MUS 1102.
- 1122 Aural Skills II**
(2-1) 2 hours credit. Prerequisite: MUS 1102 or the equivalent.
Offers the opportunity to continue training in sight singing, aural skills, and keyboard with emphasis on harmonic skills and twentieth century materials. Should be taken concurrently with MUS 1132.
- 1132 Basic Skills of Music II**
(2-0) 2 hours credit. Prerequisite: MUS 1112 or the equivalent.
Offers the opportunity for development of harmonic analytical and writing skills. Analytical techniques applied to music from a variety of style periods.
- 1251 Basic Repertoire**
(1-0) 1 hour credit. A listening-discussion course covering principal works from the current concert repertoire. As far as possible, works studied will coordinate with programs of the San Antonio Symphony and other major civic series.
- 1511 Music Performance-Secondary Instrument**
1 hour credit.
Private instruction for students desiring or required to study as secondary instrument the following: baritone, bassoon, clarinet, contrabass, cornet, flute, classical guitar, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, voice. Seminar attendance may be required. May be repeated for credit.
- 1522 Class Piano**
(2-1) 2 hours credit.
For students with little or no piano background. Basic musical and technical skills of hand position, tone production, memorization, sight-reading, and musical style are introduced through the study of technical exercises and solo literature. May be repeated for credit at a more advanced level.

1531 Class Voice

(1-0) 1 hour credit. Prerequisite: Placement examination.

For students with no previous vocal training. Offers the opportunity for development of fundamentals of voice technique through in-class performances of suitable songs. May be repeated for credit.

1532 Functional Piano for Non-Keyboard Principals

(2-0) 2 hours credit. Prerequisite: 2 semesters of MUS 1511 or audition.

For non-keyboard majors to have the opportunity to develop score-reading, transposition, and multiple-part reading.

1542 Music Performance-Private Instruction I

2 hours credit. Prerequisite: Placement by examination. Concurrent enrollment in an assigned University ensemble is required.

Private instruction for students desiring or required to study the following instruments: baritone, bassoon, clarinet, contrabass, cornet, flute, classical guitar, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, voice. Seminar attendance may be required. May be repeated for credit.

1552 Functional Piano for Keyboard Principals

(2-0) 2 hours credit.

Offers the opportunity for development of keyboard skills, harmonization, transposition, and improvisation of accompaniments to melodies, sight-reading, score-reading, and multiple-part reading.

2001 Concert Music

(1-0) 1 hour credit. Enrollment limited to students enrolled in music degree program.

Required attendance at a selected number of approved music concerts and recitals as determined by the Division of Music. May be repeated for credit.

2102 Aural Skills III

(2-1) 2 hours credit. Prerequisite: MUS 1122 or the equivalent.

Sight singing, aural skills, and keyboard techniques applied to literature and theory drawn from MUS 2152. Should be taken concurrently with MUS 2152.

2112 Aural Skills IV

(2-1) 2 hours credit. Prerequisites: MUS 2102 and 2152 or the equivalents.

Application of skills to materials drawn from MUS 2162. Should be taken concurrently with MUS 2162.

2132 Improvisation

(2-0) 2 hours credit. Prerequisite: MUS 1132 or consent of instructor.

Offers the opportunity for development of creative skills applied to melodic, rhythmic, and harmonic elaboration techniques adapted to the student's instrument. Stylistic elements according to the section offered: Jazz Improvisation, Improvisation in Traditional Styles.

2142 Composition I

2 hours credit. Prerequisites: MUS 1102, 1112, and consent of instructor.

Fundamentals of composition through small forms. Seminar attendance may be required.

2152 Basic Skills of Music III

(2-0) 2 hours credit. Prerequisite: MUS 1132 or equivalent.

A survey of the chromatic materials of music with emphasis on writing and analytical skills. Includes an introduction to Schenkerian concepts of structural analysis. Should be taken concurrently with MUS 2102.

2162 Basic Skills of Music IV

(2-0) 2 hours credit. Prerequisite: MUS 2152 or equivalent.

The continued study of chromatic materials of music and of Schenkerian concepts of analysis. Includes a survey of form as well as an introduction to analytical techniques for early twentieth-century music. Should be taken concurrently with MUS 2112.

2253 Introduction to Music Literature

(2-0) 3 hours credit. Prerequisite: MUS 1132 or permission of instructor.

A study of music literature and the concepts associated with the principal performance genres. Includes biography, style analysis, and social and aesthetic backgrounds.

2403 Conducting I: Elementary Schools

(3-1) 3 hours credit. Prerequisite: MUS 1132 or the equivalent. Fundamentals of beat patterns, score mechanics and score-reading, regular and irregular meters, gesture design, left hand cuing, and rehearsal techniques.

2413 Conducting II: Secondary Schools

(3-1) 3 hours credit. Prerequisite: MUS 2403 or the equivalent. Offers the opportunity for continued training in conducting emphasizing score-reading, rehearsal techniques, expressive conducting, score interpretation, and repertoire.

2501 Accompanying

(0-2) 1 hour credit.

The study of the skills and aesthetic principles needed to accompany vocal and instrumental music. Practical experience may be accomplished through accompanying activities. May be repeated for credit.

2542 Music Performance Private Instruction II

2 hours credit. Prerequisite: MUS 1542 or placement by examination. Concurrent enrollment in an assigned University ensemble is required.

Private instruction for students desiring or required to study the following instruments: baritone, bassoon, clarinet, contrabass, cornet, flute, classical guitar, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, voice. Seminar attendance may be required. May be repeated for credit.

2603 Class Guitar

(3-0) 3 hours credit.

An introductory course intended primarily for the non-music major. Emphasis will be on music in the first position (through the fourth fret) while learning technical aspects as defined by the early nineteenth-century guitar masters.

2613 Intermediate Guitar

(3-0) 3 hours credit. Prerequisite: MUS 2603 or equivalent.

Designed primarily for the non-music major. Continued study of rudimentary classical guitar repertoire and basic elements of classic guitar technique.

2623 Music Reading and Notation for the Non-Music Major

(3-0) 3 hours credit.

Basic elements of reading pitch, rhythm, and meter in traditional music notation. Application of these principles to writing melodic lines and harmonizations.

2663 History and Styles of Jazz

(3-0) 3 hours credit. Enrollment in this course will not be permitted if MUS 2653, Jazz and Rock Music has already been successfully completed.

A survey of the evolution of jazz styles, contributions of important performers, and musical techniques involved in the creation and performance of jazz music.

2673 History and Styles of Rock

(3-0) 3 hours credit. Enrollment in this course will not be permitted if MUS 2653, Jazz and Rock Music, has already been successfully completed.

A survey of the evolution of rock styles, contributions of important performers, and musical techniques involved in the creation and performance of rock music.

3113 Analysis I

(3-0) 3 hours credit. Prerequisites: MUS 2112, 2162, and 2253 or the equivalents.

Analysis of musical form concentrating on small structural units such as motives, phrases, periods, binaries, and ternaries. Includes a survey of larger forms such as Sonata Form, Theme and Variations, Rondo, and Concerto.

3123 Introduction to Electronic Music

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

A conceptual and practical introduction to synthesizers, tape recorders, mixers, and out-board devices such as equalizers and reverberation chambers. Includes a survey of electronic music history and literature.

- 3133 Analysis II**
(3-0) 3 hours credit. Prerequisite: MUS 3113.
In-depth structural analysis of larger forms of music such as Rondo, Sonata Form, Theme and Variations, and Concerto.
- 3143 Orchestration**
(3-0) 3 hours credit. Prerequisites: MUS 2112, 2162, and 2253.
Applied instrumentation, emphasizing idiomatic scoring for various orchestral and wind combinations with an approach to writing for full orchestra and symphonic band.
- 3162 Composition II**
2 hours credit. Prerequisites: MUS 2112, 2142, 2162, 2253, and consent of instructor.
Private study in applied composition with emphasis on expansion of musical materials to larger forms. Seminar attendance may be required.
- 3172 Composition in Electronic Media**
(2-0) 2 hours credit. Prerequisite: MUS 3123.
Private study in composition with an emphasis on Electro-Acoustic Music techniques such as tape recorder manipulations and analog and digital sound synthesis. Seminar attendance may be required. May be repeated for credit.
- 3213 Music in Western Civilization I**
(3-0) 3 hours credit. Prerequisites: MUS 2162 and 2253 or the equivalents.
A study of musical styles and literature in the Medieval, Renaissance, and Baroque periods.
- 3223 Music in Western Civilization II**
(3-0) 3 hours credit. Prerequisites: MUS 2162 and 2253 or the equivalents.
A study of musical styles and literature in the Classic, Romantic, and Contemporary periods.
- 3252 Advanced Studies in Music Literature and Analysis**
(2-1) 2 hours credit. Prerequisite: Upper-division standing and consent of instructor.
Topics include: Chamber Music; Wind Literature (Secondary Schools); Vocal Literature; Orchestral Literature; History and Literature of the Guitar; Choral Literature (Secondary Schools); Literature of the Pianoforte; Organ Literature; The Operatic Tradition; Advanced Analytical Techniques; Music Since 1950; and The Instrumental Concerto. Two or more topics may be taken concurrently. May be repeated for credit when topics vary.
- 3313 Microcomputer Applications in Music and Music Business**
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Fundamentals of current software and hardware. Topics include computerized music editing and synthesis, MIDI applications, music printing, business software (word processing, database, spreadsheet), and appropriate subsets of the BASIC programming language.
- 3401 Brass Techniques: Elementary School**
(1-1) 1 hour credit. Prerequisite: MUS 1132 or the equivalent.
A study of the playing and teaching techniques, selection of materials, and maintenance care for brass instruments. Designed for the public school instrumental teacher.
- 3413 Introduction to Music Education**
(3-1) 3 hours credit. Prerequisites: MUS 2162 and 2253 or the equivalents and upper-division standing in music.
A general orientation to the music education profession. Philosophy of music education, methods of music instruction, and materials for music learning in the elementary and secondary schools.
- 3451 Woodwind Techniques: Elementary School**
(1-1) 1 hour credit. Prerequisite: MUS 1132 or the equivalent.
A study of the playing and teaching techniques, selection of materials, and maintenance care for woodwind instruments. Designed for the public school instrumental teacher.
- 3463 General Music in the Junior High School**
(3-0) 3 hours credit. Prerequisite: Upper-division standing in music.
The objectives, contents, and methods in the teaching of general music in the middle or junior high school. Special attention is given to problems related to the changing voice.

- 3471 String Techniques: Elementary School**
 (1-1) 1 hour credit. Prerequisite: MUS 1132 or the equivalent.
 A study of the playing and teaching techniques, selection of materials, and maintenance care for string instruments. Designed for the public school instrumental teacher.
- 3481 Percussion Techniques: Elementary School**
 (1-1) 1 hour credit. Prerequisite: MUS 1132 or the equivalent.
 A study of the playing and teaching techniques, selection of materials, and maintenance care for percussion instruments. Designed for the public school instrumental teacher.
- 3501 Diction for Singers and Conductors**
 (1-1) 1 hour credit.
 A study of English and foreign language pronunciation as applied to public performance. Topics include English, French, Italian, German, and Survey. May be repeated for credit.
- 3532 Music Performance-Private Instruction III**
 2 hours credit. Prerequisite: MUS 2542 or placement by examination. Concurrent enrollment in an assigned University ensemble is required.
 Private instruction for students desiring or required to study the following instruments: baritone, bassoon, clarinet, contrabass, cornet, flute, classical guitar, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, voice. Seminar attendance may be required. May be repeated for credit.
- 3543 Music Performance-Private Instruction IV**
 3 hours credit. Prerequisite: Upper-division standing and consent of instructor. Concurrent enrollment in an assigned University ensemble is required.
 Limited to students accepted to upper-division standing in the performance emphasis of the Bachelor of Music Degree program. Private instruction at an advanced level in baritone, bassoon, clarinet, conducting, contrabass, cornet, flute, classical guitar, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, voice. Seminar attendance may be required. May be repeated for credit.
- 3613 Music in Contemporary Life**
 (3-0) 3 hours credit.
 Designed to offer the opportunity to increase the student's awareness of the varied functions of music in our society. Film and television music; environmental music; the recording industry; the publishing industry; music in the schools; ceremonial music; and concert life.
- 3643 Masterpieces of Music**
 (3-0) 3 hours credit.
 A study of individual works selected from and representative of the musical traditions of the Western world. Background information on social setting and function, historical importance, aesthetics, and composers' biographies.
- 3653 Music for the Classroom Teacher**
 (3-1) 3 hours credit.
 Development of the classroom music program in the elementary school, including techniques and materials.
- 3701 Madrigal Singers**
 (0-3) 1 hour credit. Prerequisite: Consent of instructor by audition.
 An ensemble specializing in the performance of outstanding chamber choral music from the Middle Ages to the present. Previous musical experience and reading ability required. The ensemble performs on and off campus. May be repeated for credit.
- 3712 Concert Choir**
 (0-5) 2 hours credit. Prerequisite: Consent of instructor by audition.
 A select ensemble open to all students by audition. The group performs a variety of repertoire from all historical periods. May be repeated for credit.
- 3721 UTSA Chorus**
 (0-3) 1 hour credit.
 This choral ensemble is open to all students without audition. No previous choral experience is necessary. Many types of music are studied, and the repertoire is moderate in difficulty. May be repeated for credit.

- 3741 String Orchestra**
(0-2) 1 hour credit. Open to all string students by audition. Concurrent registration in MUS 3761 Orchestra is required.
This ensemble will study, rehearse, and perform literature from the string orchestra repertoire. May be repeated for credit.
- 3742 UTSA Wind Ensemble**
(0-5) 2 hours credit. Prerequisite: Consent of instructor.
The wind ensemble studies, rehearses, and performs the repertoire for various combinations of wind instruments. May be repeated for credit.
- 3751 Symphonic Band**
(0-3) 1 hour credit. Open to all students by audition.
Ensemble performs traditional repertoire for the full symphonic band. May be repeated for credit.
- 3761 Orchestra**
(0-3) 1 hour credit. Open to all students by audition. Concurrent registration in MUS 3741 String Orchestra is required of all string principals.
The UTSA orchestra studies, rehearses, and performs literature from the basic orchestral repertoire. May be repeated for credit.
- 3771 Jazz Ensemble**
(0-3) 1 hour credit. Open to all students by audition.
An ensemble specializing in the performance of the various streams of jazz and other music appropriate to stage bands and jazz ensembles. May be repeated for credit.
- 3781 UTSA Roadrunner Band**
(0-3) 1 hour credit. Open to all students by audition.
An instrumental ensemble performing contemporary popular literature at UTSA athletic events and other university-related functions. May be repeated for credit.
- 3791 Opera Workshop**
(0-3) 1 hour credit. Open to all students by audition.
The study and performance of opera and other types of musical theatre from the Baroque period to the present. May be repeated for credit.
- 4113 Counterpoint**
(3-0) 3 hours credit. Prerequisites: MUS 2112, 2162, and 2253.
Contrapuntal techniques of the 16th, 18th, and 20th centuries developed through writing and analysis.
- 4142 Composition III**
2 hours credit. Prerequisites: MUS 3113 and 3162, or consent of instructor.
Writing in the larger forms for small and large ensembles and electronic media. Seminar attendance may be required. May be repeated for credit.
- 4423 Music in the Elementary School**
(3-1) 3 hours credit. Prerequisite: MUS 3413 or 3653, or consent of instructor.
Examination of current and historical methodologies such as Kodaly, Orff, and CMP. Classroom instruments will be studied.
- 4453 Marching Band Techniques**
(3-1) 3 hours credit. Prerequisites: MUS 2162 and 2253.
Techniques for the development of a marching band are presented for prospective band directors.
- 4532 Music Pedagogy**
(2-1) 2 hours credit. Prerequisite: Upper-division standing in music.
Survey of techniques, practices, and materials of teaching the orchestral and solo instruments. Review of materials for beginning, intermediate, and advanced students. Topics include Strings, Brass, Woodwinds, Percussion, Guitar, Piano, Organ, Voice, and Instrumental Ensemble Pedagogy. May be repeated for credit when topics vary.
- 4544 Music Performance-Private Instruction V**
4 hours credit. Prerequisites: MUS 3543 or MUS 3544 or equivalent and consent of instructor. Limited to students accepted to upper-division standing in the performance emphasis of the Bachelor of Music degree program. Concurrent enrollment in an assigned University ensemble is required.

Private instruction at an advanced level in baritone, bassoon, clarinet, contrabass, cornet, flute, classical guitar, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, voice. Seminar attendance may be required. May be repeated for credit.

4561 Senior Recital

1 hour credit. Prerequisite: Consent of instructor.

A public performance presented as a culmination of the student's private instruction. Concurrent enrollment with MUS 4544 is required of performance majors; concurrent enrollment in MUS 4142 is required of Theory-Composition majors.

4581 Chamber Music

(0-3) 1 hour credit. Prerequisite: Upper-division standing in music.

Designed to offer students the opportunity to gain knowledge of chamber music literature and to perform this repertoire. Instruction in brass ensemble, woodwind ensemble, percussion ensemble, string ensemble, mixed ensemble. May be repeated for credit.

4803 Seminar in Music Marketing

(3-0) 3 hours credit. Prerequisite: MUS 3613 or consent of instructor.

An intensive study of music markets, channels of distribution, strategies and musical product management.

4911-3 Independent Study

1-3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, and the Division Director and Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4951 Special Studies in Music

1 hour credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4953 Special Studies in Music

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4983 Honors Seminar

3 hours credit. Prerequisites: Overall university GPA of 3.0 and GPA of 3.5 in music courses, and consent of instructor.

An undergraduate seminar limited to music majors in one of their last two semesters who qualify to graduate with Division honors in Music. Intensive study of a topic within each student's area of concentration. Students present research in the form of a lecture or lecture-recital.

COLLEGE OF SCIENCES AND ENGINEERING

COLLEGE HONORS

The College of Sciences and Engineering designates certain of its outstanding students as Honors students and provides the opportunity for advanced study under close faculty supervision.

Selection of students for admission to the College Honors Program is based on: 1) the student's academic performance, and 2) recommendation by the faculty of the student's major discipline. To be eligible for the program, students must have a minimum grade-point average of 3.00 overall at UTSA and a minimum grade-point average of 3.00 in their major at UTSA. The minimum grade-point averages must be maintained for students to receive the approval of the College Honors Committee and the discipline faculty. Students admitted to the Honors program are expected to enroll in the appropriate Honors Research course during the final two semesters in residence. The completed research paper must be approved by the supervising faculty sponsor and another college faculty member. Students interested in this program should contact their faculty advisors for additional information.

DIVISION OF EARTH AND PHYSICAL SCIENCES

The degree programs offered by this Division reflect its policy of offering the opportunity for a comprehensive education of the highest quality, individualized to the needs and interests of the student. Completion of a core curriculum allows the student to apply for entry into one of several highly specialized areas in Chemistry, Geology, or Physics. A student who has majored in any of these degree programs is eligible to apply for positions in industry and government as well as apply for entry into professional and graduate schools.

BACHELOR OF SCIENCE DEGREE IN CHEMISTRY

The Bachelor of Science Degree in Chemistry provides opportunities for preparation for careers in industry, government agencies, environmental studies, preprofessional programs, medical technology, and for graduate study in chemistry or other related fields.

The minimum number of semester hours required for this degree, including the 42 semester hours of General Education Requirements, is 133. All candidates for the degree must complete:

A. 50 semester hours of required courses in Chemistry.

- CHE 1103 Introductory Chemistry
- CHE 1303 Chemical Principles
- CHE 1312 Inorganic Qualitative and Quantitative Analysis
- CHE 2203 Organic Chemistry I
- CHE 2242 Organic Chemistry I Laboratory
- CHE 2251 Organic Chemistry I Recitation
- CHE 2303 Organic Chemistry II
- CHE 2342 Organic Chemistry II Laboratory
- CHE 2351 Organic Chemistry II Recitation
- CHE 3103 Analytical Chemistry
- CHE 3204 Physical Chemistry I

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- CHE 3212 Physical Chemistry Laboratory
- CHE 3224 Physical Chemistry II
- CHE 3243 Instrumental Analysis
- CHE 4243 Organic Chemistry III
- CHE 4253 Physical Chemistry III
- CHE 4263 Inorganic Chemistry
- CHE 4923 Special Project in Chemistry or CHE 4913 Independent Study
- CHE 4971 Proseminar (2 semester credit hours are required for the degree)

- B. 9 additional semester hours of approved *elective* Chemistry at the upper-division level are required.
- C. 26 semester hours of *support work* in Science and Mathematics.
 - 1. Required courses are:
 - MAT 1214 Calculus I
 - MAT 1223 Calculus II
 - MAT 2213 Calculus III or CS 1723 Data Structures I
 - PHY 1904 Technical Physics I
 - PHY 1911 Technical Physics I Laboratory
 - PHY 1924 Technical Physics II
 - PHY 1931 Technical Physics II Laboratory
 - 2. 6 additional hours of *elective work* are required in courses in the College of Sciences and Engineering, as approved by the Advisor.
- D. 3 semester hours minimum in computer science.
 - CS 1073 Introductory Computer Programming for Scientific Applications
 - or
 - CS 1713 Introduction to Computer Science and
 - CS 1711 Introduction to Computer Science Laboratory
- E. 3 semester hours of *electives*.

COURSE DESCRIPTIONS
CHEMISTRY
(CHE)

- 1003 General Chemistry for Allied Health Sciences**
(3-0) 3 hours credit. Prerequisite: Concurrent enrollment in CHE 1011.
Introduction to atomic structure, chemical bonding, stoichiometry, states of matter, inorganic chemical reactions, acids and bases. For majors in physical therapy, occupational therapy, prenursing, and dental hygiene. May not be applied to a major in chemistry, biology, or medical technology.
- 1011 General Chemistry Laboratory for Allied Health Sciences**
(0-4) 1 hour credit. Prerequisite: Concurrent enrollment: CHE 1003.
Introduction to chemical laboratory techniques. For majors in physical therapy, occupational therapy, prenursing, and dental hygiene. May not be applied to a major in chemistry, biology, or medical technology.
- 1103 Introductory Chemistry**
(3-0) 3 hours credit. Concurrent enrollment in CHE 1122 and MAT 1013 recommended.
An introduction to descriptive inorganic chemistry and atomic-molecular structure. Including such fundamental concepts as the periodic system of elements, valency, chemical bonding, reactions and reaction mechanisms, stoichiometry, equilibria, acids and bases, thermochemistry, molecular-kinetic theory, and states of matter.

1122 Introductory Chemistry Laboratory Workshop

(1-4) 2 hours credit. Prerequisite or concurrent enrollment: CHE 1103.

An introduction to chemical problem solving and the basic operations of the chemical laboratory; and a survey of inorganic chemical reactions. This course consists of problem sessions, lecture-demonstrations, and/or laboratory experience.

1203 Elementary Organic and Biochemistry

(3-0) 3 hours credit. Prerequisites: CHE 1003 and 1011. May not be applied to a major in chemistry.

A survey of the structures and reactions of some important functional groups of organic chemistry. The relationship of these functional groups to the chemistry of lipids, carbohydrates, nucleic acids and proteins. Formerly CHE 2103.

1211 Organic and Biochemistry Laboratory

(0-4) 1 hour credit. Prerequisite or concurrent enrollment: CHE 1203. May not be applied to a major in chemistry.

Laboratory examination of the properties of some simple organic and biological chemicals; solubility, crystallization, organic reactions, titration, enzyme action, sugars and vitamins. Formerly CHE 2111.

1303 Chemical Principles

(3-0) 3 hours credit. Prerequisite: CHE 1103. Primarily for science majors.

Elementary inorganic and physical chemistry: descriptive inorganic chemistry, coordination chemistry, solutions and electrolytes, redox processes, elementary thermodynamics, chemical kinetics, and elementary electrochemistry. Formerly CHE 2003.

1312 Inorganic Qualitative and Quantitative Analysis

(1-5) 2 hours credit. Prerequisite or concurrent enrollment: CHE 1303.

Techniques of qualitative and quantitative chemical analysis, illustrated primarily via inorganic chemical systems and their reactions. Formerly CHE 2012.

2203 Organic Chemistry I

(3-0) 3 hours credit. Prerequisites: CHE 1303 and 1312. Primarily for chemistry, pre-med and science majors.

An elementary study of structure, stereochemistry, reactions, and reaction mechanisms associated with organic compounds.

2242 Organic Chemistry I Laboratory

(1-5) 2 hours credit. Prerequisite or concurrent enrollment: CHE 2203.

Qualitative analysis and determination of the physical constants of organic compounds. Separation, identification and elementary synthesis of organic compounds. Laboratory techniques (crystallization, distillation, chromatographic) and spectroscopic techniques (IR, NMR, MS) are emphasized.

2251 Organic Chemistry I Recitation

(1-0) 1 hour credit. Prerequisite or concurrent enrollment: CHE 2203.

A recitation section for discussion of problems amplifying and clarifying textual content of CHE 2203.

2303 Organic Chemistry II

(3-0) 3 hours credit. Prerequisite: CHE 2203; Prerequisite or concurrent enrollment: CHE 2242.

Continuing study of fundamentals of structure, reactions and reaction mechanisms of phosphorus and sulphur; poly-functional organic compounds. A continuation of CHE 2203. Formerly CHE 3003.

2342 Organic Chemistry II Laboratory

(1-5) 2 hours credit. Prerequisite: CHE 2242. Prerequisite or concurrent enrollment: CHE 2303.

Quantitative and continuing qualitative study of organic reactions and molecular structure through functional group interactions and spectroscopic techniques. Simple and multi-step syntheses of organic compounds. Formerly CHE 3022.

2351 Organic Chemistry II Recitation

(1-0) 1 hour credit. Prerequisite or concurrent enrollment: CHE 2303.

A recitation section for discussion of problems amplifying and clarifying textual content of CHE 2303.

3103 Analytical Chemistry

(2-5) 3 hours credit. Prerequisites: CHE 1303 and 1312.

A detailed study of wet chemical and basic instrumental analysis including gravimetric, volumetric, and spectrophotometric determinations.

3204 Physical Chemistry I

(4-0) 4 hours credit. Prerequisites: CHE 1303, 1312, MAT 1223, PHY 1924, and 1931; two semesters of organic chemistry are strongly recommended.

States of matter, gas laws, equations of state, inter-molecular interactions; thermodynamics and physical equilibria, elements of molecular-kinetic theory and statistical mechanics; physico-chemical properties of solutions, chemical equilibria, phase equilibria, and changes of state.

3212 Physical Chemistry Laboratory

(0-6) 2 hours credit. Prerequisite or concurrent enrollment: CHE 3204.

Experimental study of thermodynamics and electrochemistry, spectroscopy, and reaction kinetics.

3224 Physical Chemistry II

(4-0) 4 hours credit. Prerequisite: CHE 3204.

Chemical kinetics, electrolytes and electrochemistry, elements of quantum mechanics, chemical bonds, spectroscopy, and photo-chemistry. A continuation of CHE 3204.

3243 Instrumental Analysis

(1-6) 3 hours credit. Prerequisites or concurrent enrollment: CHE 2342, 3212, and 3224.

Electrochemical methods; use of modern spectrometric and chromatographic instrumentation in separation, purification, and/or quantitative characterization of chemical systems. Formerly CHE 3232.

4243 Organic Chemistry III

(3-0) 3 hours credit. Prerequisites: CHE 2303, 2342, and 2351; CHE 3204 or consent of instructor.

Advanced mechanistic and/or synthetic aspects of organic reactions; additional topics such as molecular rearrangements, organic molecular orbital theory and its application to pericyclic reactions.

4253 Physical Chemistry III

(3-0) 3 hours credit. Prerequisites: CHE 2303, 3224 and 3243; or consent of instructor.

Relations between structure of molecules and physico-chemical properties of gases, liquids and solids — quantum mechanical and statistico-thermodynamical approach.

4263 Inorganic Chemistry

(3-0) 3 hours credit. Prerequisite: CHE 3204.

A study of the structure, bonding, and properties of inorganic compounds; acid-base theory, crystalline state, coordination chemistry, and other advanced topics.

4373 Organic Spectral Studies

(3-0) 3 hours credit. Prerequisite: CHE 3022.

Identification of functional groups and the determination of the structure of compounds by spectral techniques including IR, NMR, mass spectroscopy and UV-Vis absorption spectroscopy; basic theory of spectral measurements with emphasis on practical applications.

4403 Chemistry of Heterocyclic Compounds

(3-0) 3 hours credit. Prerequisite: CHE 3003 or consent of instructor.

The chemistry of nitrogen, oxygen, and sulfur heterocycles. Five-membered and six-membered ring systems with one and more than one heteroatom. Applications in the field of synthetic drugs.

4603 Synthesis and Biosynthesis of Natural Products

(3-0) 3 hours credit. Prerequisite: CHE 4373, 4243, and/or BIO 3513 are recommended.

Comparison of chemical and biochemical formations and transformations for several classes of naturally occurring compounds such as steroids, terpenoids, alkaloids, and other natural products of chemical or biological importance.

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4911-3 Independent Study

1-3 hours credit. Prerequisite: Permission in writing (form available). Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work. May be repeated for credit, but not more than 6 hours will apply to the bachelor's degree.

4923 Special Project in Chemistry

3 hours credit. Prerequisite: Consent of Division Director. A special laboratory research or library readings project under the direction of a faculty member, resulting in a report, limited to students in their final year of undergraduate study.

4953 Special Studies in Chemistry

3 hours credit. Prerequisite: Upper division standing and consent of instructor. An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies Courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4971 Proseminar

(0-3) 1 hour credit. Prerequisites: CHE 2303 and CHE 3204. Oral reports on current publications in chemistry and chemical technology and the utilization of important chemical reference materials and periodicals. May be repeated for credit when topics vary, with consent of the Division Director, but only two hours may be applied towards the degree.

4993 Honors Research

3 hours credit. Prerequisite: Enrollment limited to candidates for College Honors during the last two semesters; approval by the College Honors Committee. Supervised research and preparation of an honors thesis. May be repeated only once with approval.

BACHELOR OF SCIENCE DEGREE IN GEOLOGY

The Bachelor of Science Degree in Geology provides opportunities for preparation for careers in petroleum, mining, water resources, environmental management, governmental agencies, engineering geology, geochemistry, geophysics, and natural resources.

The minimum number of semester hours required for this degree, including the 42 semester hours of General Education Requirements, is 133.

All candidates for the degree must complete:

A. Division of Earth and Physical Science Requirements

58 semester hours in Geology minimum, 38 of which must be at the upper-division level.

1. *Specific Requirements: 45 Semester hours*

GEO 1003	Introduction to Geology
GEO 1011	Introduction to Geology Laboratory
GEO 1023	Earth History
GEO 1031	Earth History Laboratory
GEO 2003	Mineralogy
GEO 2011	Mineralogy Laboratory
GEO 2023	Optical Mineralogy
GEO 2031	Optical Mineralogy Laboratory
GEO 2063	Paleontology
GEO 2071	Paleontology Laboratory
GEO 3043	Petrology
GEO 3052	Petrology Laboratory

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GEO 3083	Stratigraphy
GEO 3103	Structural Geology
GEO 3111	Structural Geology Laboratory
GEO 3123	Sedimentary Geology
GEO 3131	Sedimentary Geology Laboratory
GEO 3943	Field Methods in Geology
GEO 4946	Field Geology

2. *Additional Requirements: any 13 semester hours (maximum of 3 hours from GEO 4911-3 or 4953).*

GEO 3143	Economic Geology
GEO 3151	Economic Geology Laboratory
GEO 3163	Oceanography
GEO 3182	Geology of Energy Resources
GEO 3191	Geology of Energy Resources Laboratory
GEO 3373	Geochemistry
GEO 3383	General Geophysics
GEO 4023	Engineering Geology
GEO 4063	Principles of Environmental Geology
GEO 4113	Geomorphology
GEO 4121	Geomorphology Laboratory
GEO 4263	Quantitative Structural Geology
GEO 4623	Groundwater Hydrology
GEO 4911-3	Independent Study
GEO 4953	Special Studies in Geology
GEO 4993	Honors Research

B. Requirements within the College of Sciences and Engineering: 27 semester hours are required in the College of Sciences and Engineering, with a minimum of 18 semester hours chosen from the following courses:

1. *Specific Requirements:*

CHE 1103	Introductory Chemistry
CHE 1303	Chemical Principles
CHE 1312	Inorganic Qualitative and Quantitative Analysis
CS 1073	Introductory Computer Programming for Scientific Applications, <i>or</i>
CS 1713	Introduction to Computer Science <i>and</i>
CS 1711	Introduction to Computer Science Laboratory
MAT 1223	Calculus II
PHY 1924	Technical Physics II, <i>or</i> PHY 1623 General Physics II
PHY 1931	Technical Physics II Laboratory, <i>or</i> PHY 1631 General Physics II Laboratory

2. *Additional Requirements: any 9 semester hours minimum with consent of advisor*

C. 6 semester hours of electives.

COURSE DESCRIPTIONS
GEOLOGY
(GEO)

1003 Introduction to Geology

(3-0) 3 hours credit. Concurrent enrollment in GEO 1011 recommended.

The Earth as a dynamic planet; relation of Earth's present day processes to its resources, structure and internal composition. Nature of minerals and rocks, the hydrosphere, tectonics, earthquakes, volcanism, and surface features of Earth.

- 1011 Introduction to Geology Laboratory**
(0-3) 1 hour credit. Prerequisite or concurrent enrollment: GEO 1003.
Relation of Earth's present day processes to its resources, structure and internal composition. Field trips and laboratory study of minerals, rocks, maps and aerial and satellite photos.
- 1023 Earth History**
(3-0) 3 hours credit. Concurrent enrollment in GEO 1031 recommended.
Formation and evolution of the Earth, its life forms, and the major features of its surface.
- 1031 Earth History Laboratory**
(0-3) 1 hour credit. Prerequisite or concurrent enrollment: GEO 1023.
Laboratory study of fossils and rock sequences; interpretation of Earth history.
- 2003 Mineralogy**
(3-0) 3 hours credit. Prerequisites: GEO 1003 and 1011, MAT 1093, CHE 1103, or consent of instructor. Concurrent enrollment: GEO 2011.
Crystallography, chemistry, physical properties and origins of minerals.
- 2011 Mineralogy Laboratory**
(0-3) 1 hour credit. Prerequisite: Concurrent enrollment: GEO 2003.
Laboratory study of crystal models, crystals and minerals.
- 2023 Optical Mineralogy**
(3-0) 3 hours credit. Prerequisites: GEO 2003 and 2011. Concurrent enrollment: GEO 2031.
Principles and methods of optical mineralogy. Optical properties of minerals and microscopic determination of opaque and non-opaque minerals.
- 2031 Optical Mineralogy Laboratory**
(0-3) 1 hour credit. Prerequisites: GEO 2003 and 2011. Concurrent enrollment: GEO 2023.
Use of the petrographic microscope for the identification of minerals.
- 2063 Paleontology**
(3-0) 3 hours credit. Prerequisites: GEO 1003, 1011, 1023, 1031, or consent of instructor. Concurrent enrollment: GEO 2071.
Study of fossil animals and plants. Emphasis on invertebrate animals. Systematics, biostratigraphy, paleoecology, and evolution of fossil organisms. Field trips required.
- 2071 Paleontology Laboratory**
(0-3) 1 hour credit. Prerequisites: GEO 1003, 1011, 1023 and 1031. Concurrent enrollment: GEO 2063.
Study of fossil specimens, collections and preparation techniques. Field trips required.
- 3023 Engineering Geology**
(3-0) 3 hours credit. Prerequisites: PHY 1904; or PHY 1603 and MAT 1214; or consent of instructor.
Geologic factors in construction. Geotechnical properties of minerals, rocks and soils. Case studies. Field trips required.
- 3043 Petrology**
(3-0) 3 hours credit. Prerequisites: GEO 2023 and 2031. Concurrent enrollment: GEO 3052.
Description, classification, occurrence, and origin of igneous, metamorphic, and sedimentary rocks. Field trips required.
- 3052 Petrology Laboratory**
(0-4) 2 hours credit. Prerequisites: GEO 2023 and 2031. Concurrent enrollment: GEO 3043.
Laboratory study of rocks in hand specimen and thin section.
- 3083 Stratigraphy**
(3-0) 3 hours credit. Prerequisites: GEO 2063 and 2071, or consent of instructor.
Application of geologic principles to the interpretation of rocks formed at or near the surface of the earth. Field trips required.

- 3103 Structural Geology**
(3-0) 3 hours credit. Prerequisites: GEO 3043 and 3052. Concurrent enrollment: GEO 3111.
Response of earth materials to natural stresses. Description and origin of geologic structures. Field trips required.
- 3111 Structural Geology Laboratory**
(0-3) 1 hour credit. Concurrent enrollment: GEO 3103.
Laboratory study of geologic structures using maps, cross-sections, air photos, and descriptive geometric and stereographic methods.
- 3123 Sedimentary Geology**
(3-0) 3 hours credit. Prerequisite: GEO 3083. Prerequisite or concurrent enrollment: GEO 3043 and 3052.
Processes of erosion, transportation and deposition that form bodies of sedimentary rock. Depositional systems and modeling are a significant area of study. Field trips required.
- 3131 Sedimentary Geology Laboratory**
(0-3) 1 hour credit. Prerequisites: GEO 3042 and 3052. Concurrent enrollment: GEO 3123.
Laboratory studies of sedimentary processes and their products. Hand specimens, thin sections, sedimentary structures and interpretation of depositional environments. Field trips required.
- 3143 Economic Geology**
(3-0) 3 hours credit. Prerequisites: GEO 3043, 3052 or consent of instructor. Concurrent enrollment in GEO 3151.
Ore and industrial mineral genesis, origin, description and distribution of the major mineral deposits. Field trips required.
- 3151 Economic Geology Laboratory**
(0-3) 1 hour credit. Prerequisites: GEO 3043 and 3052. Concurrent enrollment in GEO 3143.
Study of rock and mineral suites from important ore localities. Identification of ore minerals. Textures, structures and alteration zones associated with ore deposits.
- 3163 Oceanography**
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
General oceanography, with emphasis on marine geology and especially the continental margins.
- 3182 Geology of Energy Resources**
(2-0) 2 hours credit. Prerequisites: GEO 3103 and 3111. Prerequisites or concurrent enrollment: GEO 3123 and 3131, or consent of instructor. Concurrent enrollment: GEO 3191.
Geology of petroleum, natural gas, coal, uranium; geothermal energy sources.
- 3191 Geology of Energy Resources Laboratory**
(0-3) 1 hour credit. Prerequisites: GEO 3103 and 3111. Prerequisites or concurrent enrollment: GEO 3123 and 3131 or consent of instructor. Concurrent enrollment: GEO 3182.
Laboratory studies of samples, maps, logs, and seismic data. Preparation and interpretation of subsurface maps.
- 3373 Geochemistry**
(2-2) 3 hours credit. Prerequisite: CHE 2003 or consent of instructor.
A survey of geochemical processes and the distribution of elements in the earth. Application of chemical methods and data to the solution of geologic problems.
- 3383 General Geophysics**
(3-0) 3 hours credit. Prerequisites: GEO 3043 and 3052. Physics of the earth's interior, plate tectonics, geomagnetism, gravity and heat flow.
- 3943 Field Methods in Geology**
(0-9) 3 hours credit. Prerequisite or concurrent enrollment in GEO 3123, 3131, 3103, 3111, and consent of instructor.
Use of surveying methods and topographic and aerial photo bases for geologic mapping. Description, recording, and interpretation of field relationships. Field trips required.

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Bachelor of Science Degree in Physics

- 4063 Principles of Environmental Geology**
(3-0) 3 hours credit. Prerequisites: GEO 1003 and 1011.
Geologic factors important to city and regional planning. Land capability studies; geologic hazards.
- 4113 Geomorphology**
(3-0) 3 hours credit. Prerequisite: GEO 3083. Concurrent enrollment: GEO 4121.
Analysis of Cenozoic landform evolution.
- 4121 Geomorphology Laboratory**
(0-3) 1 hour credit. Prerequisite: GEO 3083. Concurrent enrollment: GEO 4113.
Interpretation of maps and aerial photographs.
- 4263 Quantitative Structural Geology**
(2-2) 3 hours credit. Prerequisites: GEO 3103 and 3111.
Stress analysis, strain measurement, cross-section balancing, and quantitative modeling in structural geology. Field trips may be required.
- 4623 Groundwater Hydrology**
(3-0) 3 hours credit. Prerequisites: GEO 1003, 1011, and PHY 1904; or PHY 1603 and MAT 1214.
Hydrologic cycle and the theory of underground water. Recharge and discharge of aquifers; water quality; exploration and development of ground water supplies. Field trips required.
- 4911-3 Independent Study**
1-3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's Advisor, and the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work. May be repeated for credit, but not more than 3 hours will apply to the bachelor's degree.
- 4946 Field Geology**
(6-12) 6 hours credit. Prerequisites: GEO 3943 and consent of instructor.
Field mapping and measurements during a six-week period in summer. Field trips required.
- 4953 Special Studies In Geology**
3 hours credit. Prerequisite: Consent of instructor.
An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to the bachelor's degree.
- 4993 Honors Research**
3 hours credit. Prerequisite: Enrollment limited to candidates for College Honors during the last two semesters; approval by the College Honors Committee.
Supervised research and preparation of an honors thesis. May be repeated only once with approval.

**BACHELOR OF SCIENCE DEGREE
IN PHYSICS**

The Bachelor of Science Degree in Physics provides the opportunities for preparation for careers in industry, government agencies, and for graduate study in physics or other related fields.

The minimum number of semester hours required for this degree option, including the 42 semester hours of General Education Requirements, is 133.

All candidates for the degree must complete:

A. Division of Earth and Physical Sciences Requirements: 40 semester hours required.

1. *25 semester hours of required courses are:*

PHY 1904	Technical Physics I
PHY 1911	Technical Physics I Laboratory
PHY 1924	Technical Physics II
PHY 1931	Technical Physics II Laboratory
PHY 3103	Modern Physics
PHY 3203	Classical Mechanics I
PHY 3343	Advanced Physics Laboratory I
PHY 3353	Advanced Physics Laboratory II
PHY 3423	Electricity and Magnetism

2. *Additional Requirements: any 15 semester hours (maximum of 3 hours from PHY 4911-3 or 4953) with consent of advisor.*

PHY 3163	Theoretical Physics
PHY 3283	Thermal Physics
PHY 3293	Statistical Mechanics
PHY 3313	Solid State Physics
PHY 3433	Introduction to the Theory of Solid State Electronics
PHY 3443	Optics
PHY 4203	Classical Mechanics II
PHY 4263	Quantum Mechanics I
PHY 4423	Quantum Mechanics II
PHY 4911-3	Independent Study
PHY 4953	Special Studies in Physics
PHY 4993	Honors Research

B. Requirements within the College of Sciences and Engineering (excluding Physics): 51 semester hours required.

1. *24 semester hours of required courses are:*

MAT 1214	Calculus I
MAT 1223	Calculus II
MAT 2213	Calculus III
MAT 3613	Differential Equations I
CHE 1103	Introductory Chemistry
CHE 1303	Chemical Principles
CHE 1312	Inorganic Qualitative and Quantitative Analysis
CS 1073	Introductory Computer Programming for Scientific Applications

2. *Additional Requirements: any 27 semester hours minimum with consent of advisor.*

COURSE DESCRIPTIONS

PHYSICS (PHY)

1603 General Physics I

(3-0) 3 hours credit. Prerequisite: Knowledge of high school algebra, trigonometry, and geometry.

Motion, forces, conservation of energy and momentum, fluids, wave motion, and heat.

1611 General Physics I Laboratory

(0-3) 1 hour credit. Prerequisite or concurrent enrollment: PHY 1603.

Laboratory to accompany PHY 1603.

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- 1623 General Physics II**
(3-0) 3 hours credit. Prerequisite: PHY 1603. Concurrent enrollment in PHY 1631 recommended.
Electrostatics, electromagnetism, light, sound, atomic and nuclear physics.
- 1631 General Physics II Laboratory**
(0-3) 1 hour credit. Prerequisite or concurrent enrollment: PHY 1623.
Laboratory to accompany PHY 1623.
- 1904 Technical Physics I**
(4-0) 4 hours credit. Prerequisite: MAT 1214. Concurrent enrollment: PHY 1911 recommended.
The basic concepts and methods of physics. Mechanics, heat, and fluids.
- 1911 Technical Physics I Laboratory**
(0-3) 1 hour credit. Prerequisite or concurrent enrollment: PHY 1904.
Laboratory to accompany PHY 1904.
- 1924 Technical Physics II**
(4-0) 4 hours credit. Prerequisite: PHY 1904. Prerequisite or concurrent enrollment: MAT 1223. Concurrent enrollment in PHY 1931 is recommended.
Electricity and magnetism, wave phenomena and elements of modern physics.
- 1931 Technical Physics II Laboratory**
(0-3) 1 hour credit. Prerequisite or concurrent enrollment: PHY 1924.
Laboratory to accompany PHY 1924.
- 3103 Modern Physics**
(3-0) 3 hours credit. Prerequisite: PHY 1924.
Special relativity, Planck's Radiation Law, elements of quantum mechanics, atomic and molecular structures and spectra. The atomic nucleus, nuclear reactions, and an introduction to elementary particles.
- 3163 Theoretical Physics**
(3-0) 3 hours credit. Prerequisites: PHY 1924 and MAT 2213.
Methods of theoretical physics applied to problems in electromagnetism, quantum and statistical physics, with an emphasis on physical formulation and interpretation.
- 3203 Classical Mechanics I**
(3-0) 3 hours credit. Prerequisite: PHY 1924. Prerequisite or concurrent enrollment: MAT 2213.
Kinematics and dynamics of systems of particles, rigid body motion. Applications are emphasized.
- 3283 Thermal Physics**
(3-0) 3 hours credit. Prerequisites: PHY 1924, CHE 2003 and MAT 1223.
Equilibrium states of single component substances. Thermodynamic laws and functions in quasi equilibrium processes, analysis of thermodynamic cycles.
- 3293 Statistical Mechanics**
(3-0) 3 hours credit. Prerequisites: PHY 1924, CHE 3203 or PHY 3283 and MAT 2213.
Kinetic Theory of macrosystems. Maxwell-Boltzman, Bose-Einstein, and Fermi-Dirac statistical distributions.
- 3313 Solid State Physics**
(3-0) 3 hours credit. Prerequisite: PHY 3103.
Crystalline structures, phonons, energy bands, and semiconductor crystals.
- 3343 Advanced Physics Laboratory I**
(0-6) 3 hours credit. Prerequisites: PHY 1924 and 1931.
Laboratory experience in the areas of optics, modern physics, solid state and surface physics.
- 3353 Advanced Physics Laboratory II**
(0-6) 3 hours credit. Prerequisite: PHY 3343.
A continuation of PHY 3343.

- 3423 Electricity and Magnetism**
(3-0) 3 hours credit. Prerequisite: PHY 1924. Prerequisite or concurrent enrollment: MAT 2213.
Vector calculus, electrostatics, magnetostatics, Faraday's Law, and Ohm's Law.
- 3433 Introduction to the Theory of Solid State Electronics**
(3-0) 3 hours credit. Prerequisites: PHY 2403 and PHY 3313 or consent of instructor.
Principles of intrinsic and extrinsic semiconductors. The theory of solid state devices.
- 3443 Optics**
(3-0) 3 hours credit. Prerequisite: PHY 3423.
The reflection, refraction, absorption, polarization, and diffraction of light. Filters, lasers, non-linear properties, and Fourier optics.
- 4203 Classical Mechanics II**
(3-0) 3 hours credit. Prerequisite: PHY 3203.
Advanced methods in mechanics, Lagrangian and Hamiltonian formulations.
- 4263 Quantum Mechanics I**
(3-0) 3 hours credit. Prerequisites: PHY 3203 and 3423, or consent of instructor.
The Schrodinger equation, operators, and perturbation methods. Applications to the harmonic oscillator and the hydrogen atom.
- 4423 Quantum Mechanics II**
(3-0) 3 hours credit. Prerequisite: PHY 4263.
The interaction of radiation with atomic systems, laser oscillations, band theory of electrons in crystals and charge transport.
- 4911-3 Independent Study**
1-3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, and the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work. May be repeated for credit, but not more than 3 hours will apply to the bachelor's degree.
- 4953 Special Studies in Physics**
3 hours credit. Prerequisite: Consent of instructor.
An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to the bachelor's degree.
- 4993 Honors Research**
3 hours credit. Prerequisite: Enrollment limited to candidates for College Honors during the last two semesters; approval by the College Honors Committee.
Supervised research and preparation of an honors thesis. May be repeated only once with approval.

COURSE DESCRIPTIONS

ASTRONOMY (AST)

- 1013 Introduction to Astronomy**
(3-0) 3 hours credit.
A descriptive course including the development of astronomy, and its methods, the motions, laws and evolution of the solar system. The general properties and types of stars, unusual stellar objects such as quasars and black holes, galaxies, evolution and cosmology. Occasional evening viewing sessions are held.
- 1031 Introduction to Astronomy Laboratory**
(0-2) 1 hour credit. Prerequisite: AST 1013 or consent of instructor.
Exercises in the use of the telescope and certain other astronomical instruments to include simple observations, measurement and photography.

COURSE DESCRIPTIONS
ENVIRONMENTAL - NATURAL RESOURCES
(ENV)

2013 Introduction to Environmental Systems

(3-0) 3 hours credit.

An introduction to the principles of man-machine-community interrelationships within the natural and built environments. General attention is given to the concepts of "growth", "processes", and "changes" occurring in ecosystems and social structures. Emphasis is placed on understanding system dynamics and how these relate to public policy formulation and natural resource utilization.

3023 Man and His Natural Resources

(3-0) 3 hours credit.

An in-depth analysis of man's dependency upon the major natural resources of the earth such as water, air, soils, forests, grasslands, minerals, fuels and wildlife, and the environmental problems that arise through societal mismanagement.

DIVISION OF ENGINEERING

The Division of Engineering offers Bachelor of Science degrees in Civil, Electrical, and Mechanical Engineering. The degree programs are designed to provide the opportunity to develop a strong foundation in science and mathematics applied to engineering analysis, design, synthesis, and evaluation. The programs in Civil Engineering, Electrical Engineering, and Mechanical Engineering are fully accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

DEGREE REQUIREMENTS

Entering students who intend to pursue an engineering degree must enroll as Pre-Engineering (PEN) majors and complete the PEN requirements listed in II.A. below. The Pre-Engineering Courses must be completed with a grade of C or better. Admission to the professional program as a major in Civil, Electrical or Mechanical Engineering requires that the student have a GPA of 2.5 or better in the PEN requirements and have an overall GPA of 2.5 or better.

All prerequisites to CE, EE, ME, or EGR courses must be completed with a grade of C or better. In addition, all students in the Division of Engineering must satisfy ABET requirements in the areas of Basic Science, Mathematics, Engineering Science, and Engineering Design. Recommended degree plans and ABET requirements are available in the Division of Engineering office.

I. General Education Requirements

All students in the Division of Engineering must satisfy the 42 semester hour General Education Requirement.

II. General Engineering Requirements

All degree candidates in the Division of Engineering must complete the following 47 semester hours.¹⁰

A. Pre-Engineering Requirements

- CHE 1103 Introductory Chemistry
- CHE 1303 Chemical Principles
- CS 2073 Programming with Engineering Applications
- EGR 1301 Introduction to Engineering Problems
- EGR 1402 Engineering Graphical Communications
- ENG 1023 Informative and Persuasive Writing
- ENG 2413 Technical Writing
- MAT 1214 Calculus I
- MAT 1223 Calculus II
- MAT 2213 Calculus III
- PHY 1904 Technical Physics I
- PHY 1911 Technical Physics I Lab
- PHY 1924 Technical Physics II
- PHY 1931 Technical Physics II Lab

1. Civil and Mechanical Engineering:

EGR 2203 Statics

2. Electrical Engineering:

EGR 2213 Engineering Mechanics

¹⁰CHE 1103, ENG 1023, MAT 1214, and CS 2073 may be used to satisfy the General Education Requirement for three hours of Science, three hours of Composition, three hours of Mathematics/Statistics, and three hours of Computer Science/Logic.

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Bachelor of Science Degree in Electrical Engineering

B. Advanced Requirements

- EGR 3713 Engineering Economic Analysis
- MAT 3253 Engineering Analysis I

**BACHELOR OF SCIENCE DEGREE IN
CIVIL ENGINEERING**

The minimum number of semester hours required for this degree is 140.

A. Required Courses (54 hours)

- CE 2103 Civil Engineering Measurements
- CE 3113 Structural Analysis
- CE 3213 Reinforced Concrete Design
- CE 3233 Steel Design
- CE 3243 Properties and Behavior of Engineering Materials
- CE 3413 Geotechnical Engineering
- CE 3603 Hydraulic Engineering
- CE 3633 Water and Wastewater Treatment
- CE 3713 Civil Engineering Systems Analysis
- CE 4113 Transportation Systems
- CE 4603 Water Resources Engineering
- CE 4653 Design of Water Pollution Control Systems
- CE 4813 Civil Engineering Design
- EGR 2503 Dynamics
- EGR 3213 Mechanics of Solids
- GEO 3023 Engineering Geology
- ME 3283 Fundamentals of Thermal Sciences
- STA 3513 Probability and Statistics

B. Civil Engineering Electives (9 hours). A minimum of 6 hours must be in Civil Engineering from the following list.

- CE 4223 Earth Structures
- CE 4323 Urban Engineering Design
- CE 4413 Foundation Engineering
- CE 4523 Advanced Reinforced Concrete Design
- CE 4543 Construction Planning
- CE 4623 Municipal & Rural Sanitation
- CE 4643 Air Pollution and Industrial Hygiene

BACHELOR OF SCIENCE DEGREE IN ELECTRICAL ENGINEERING

The minimum number of semester hours required for this degree is 140.

A. Required Courses (54 hours)

1. Electrical Engineering (48 hours)

- EE 2013 Introduction to Electrical Engineering Lab
- EE 2423 Network Theory I
- EE 2513 Logic Design
- EE 3113 Electrical Engineering Lab I
- EE 3213 Electromagnetic Engineering
- EE 3313 Electronic Circuits I
- EE 3413 Analysis and Design of Control Systems
- EE 3423 Network Theory II
- EE 3463 Microcomputer Systems I
- EE 3513 Electromechanical Systems

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Bachelor of Science Degree in Mechanical Engineering

- EE 3563 Digital Systems Design I
- EE 4113 Electrical Engineering Lab II
- EE 4313 Electronic Circuits II
- EE 4613 Communication Systems
- EE 4643 Digital Signal Processing
- EE 4813 Electrical Engineering Design

2. Supporting Areas (6 hours)

- STA 3533 Probability and Random Processes
and one of the following
- ME 3243 Materials Engineering
- ME 3283 Fundamentals of Thermal Sciences
- ME 3323 Dynamics of Mechanical Systems

B. Electrical Engineering Electives (9 hours). Nine hours of EE electives, from the following list, are required for the degree program. These courses are selected, with an advisor's consent, to extend the depth and breadth of a student's technical knowledge.

- EE 4233 Digital Laboratory
- EE 4243 Digital Systems Design II
- EE 4333 Instrumentation Systems
- EE 4343 Active Filter Synthesis
- EE 4443 Discrete-Time and Computer-Controlled Systems
- EE 4453 Principles of Bioengineering and Bioinstrumentation
- EE 4513 LSI and VLSI Design
- EE 4523 Integrated Circuit Design
- EE 4573 Engineering Workstations
- EE 4583 Microcomputer Systems II
- EE 4623 Digital Filtering
- EE 4653 Information Theory and Coding
- EE 4683 Communication Laboratory

BACHELOR OF SCIENCE DEGREE IN MECHANICAL ENGINEERING

The minimum number of semester credit hours required for this degree is 140.

A. Required Courses (51 hours)

- EE 2423 Network Theory I
- EE 3313 Electronic Circuits I
- EE 3401 Network and Electronics Lab
- EGR 2503 Dynamics
- EGR 3213 Mechanics of Solids
- ME 3241 Materials Engineering Laboratory
- ME 3243 Materials Engineering
- ME 3293 Thermodynamics I
- ME 3313 Measurements and Instrumentation
- ME 3323 Dynamics of Mechanical Systems
- ME 3513 Mechanism Design
- ME 3523 Machine Element Design
- ME 3663 Fluid Mechanics
- ME 4293 Thermodynamics II
- ME 4313 Heat Transfer
- ME 4522 Dynamic Systems and Control
- ME 4802 Mechanical Engineering Senior Laboratory

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Engineering

ME 4813 ME Design Project
MAT 3263 Engineering Analysis II

B. Engineering Electives (12 hours). A minimum of 9 hours must be in Mechanical Engineering. Students must select at least one course from each of the following lists.

1. Mechanical Engineering Application and Design:

ME 3263 Materials Processing
ME 4263 Nondestructive Evaluation
ME 4323 Thermal Systems Design I
ME 4333 Thermal Systems Design II
ME 4343 Heating, Air Conditioning, and Refrigeration Design
ME 4513 Mechanical Vibrations and Dynamics of Machinery
ME 4533 Mechanical Engineering Design Methodology
ME 4603 CAD Methodology
ME 4613 Power Systems Design
ME 4713 Robotics and Expert Systems
ME 4723 Reliability and Quality Control in Engineering Design

2. Mechanical Engineering Science:

ME 3503 Alternative Energy Sources
ME 4243 Intermediate Materials Engineering
ME 4353 Gas Dynamics
ME 4363 Intermediate Heat Transfer
ME 4503 Intermediate Dynamics
ME 4663 Intermediate Fluid Mechanics
ME 4703 Computer Applications in Mechanical Engineering

COURSE DESCRIPTIONS
ENGINEERING
(EGR)

1203 Introduction to Science and Technology

(3-0) 3 hours credit.

This course examines the current state and future directions of science and technology. Topics for discussion will be drawn from the biological sciences, earth and physical sciences, computer science, and engineering.

1301 Introduction to Engineering Problems

(1-0) 1 hour credit. Prerequisite: Pre-Engineering major and credit for or enrollment in MAT 1214.

Engineering as a career. Approaches to engineering problem solving through the use of engineering principles.

1402 Engineering Graphical Communications

(1-3) 2 hours credit. Prerequisites: Pre-Engineering major and credit for or enrollment in EGR 1301 and MAT 1214.

Technical communication, engineering graphics, and an introduction to computer-aided graphics. Introduction to engineering analysis, design synthesis, and production methods.

2203 Statics

(3-0) 3 hours credit. Prerequisites: EGR 1301, EGR 1402, MAT 1223, and PHY 1904.

Vector algebra, force systems, free body diagrams. Engineering applications of equilibrium, centroids, moments of inertia.

2213 Engineering Mechanics

(3-0) 3 hours credit. Prerequisites: EGR 1301, EGR 1402, MAT 1223, and PHY 1904. Not open to students majoring in civil or mechanical engineering. May not be substituted for EGR 2203 or EGR 2503.

Force systems, moments, equilibrium, kinematics and kinetics of particles and plane rigid bodies.

2503 Dynamics

(3-0) 3 hours credit. Prerequisites: EGR 2203 and credit for or enrollment in MAT 2213. Kinematics and kinetics of particles and plane rigid bodies, work and energy, impulse and momentum, and engineering applications.

3213 Mechanics of Solids

(3-0) 3 hours credit. Prerequisite: EGR 2203.

Internal forces and deformations in solids; stress, strain and their relations, stresses and deflections in beams, column theory and analysis, and engineering applications.

3713 Engineering Economic Analysis

(3-0) 3 hours credit. Prerequisite: Junior standing in the Division of Engineering and ENG 2413.

Techniques of economic analysis for engineering decisions, economic evaluation, and risk assessment. Formerly EGR 4713. Credit may not be obtained for both EGR 4713 and EGR 3713.

4953 Special Studies In Engineering

3 hours credit. Prerequisite: Consent of Instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4993 Honors Research

3 hours credit. Prerequisite: Enrollment limited to candidates for College Honors during the last two semesters; approval by the College Honors Committee.

Supervised research. May be repeated once with approval but not more than 3 hours, regardless of discipline, may apply to a bachelor's degree.

**COURSE DESCRIPTIONS
CIVIL ENGINEERING
(CE)**

2103 Civil Engineering Measurements

(1-6) 3 hours credit. Prerequisite: Upper division standing in Civil Engineering.

Application of electronic equipment to control, data acquisition and data analysis in the laboratory environment. Use of field surveying equipment. Acquisition and reduction of surveying data.

3113 Structural Analysis

(3-0) 3 hours credit. Prerequisite: EGR 3213.

Forces and deflections in structural systems considering stationary and moving loads, exact and approximate methods.

3213 Reinforced Concrete Design

(2-3) 3 hours credit. Prerequisite: Credit for or enrollment in CE 3113.

Ultimate strength theory and design for reinforced concrete members.

3233 Steel Design

(2-3) 3 hours credit. Prerequisite: Credit for or enrollment in CE 3113.

Analysis and design of tension members, beams, columns and bolted or welded connections.

3243 Properties and Behavior of Engineering Materials

(2-3) 3 hours credit. Prerequisites: EGR 3213 and ENG 2413.

Structure, properties, and behavior of engineering materials including concrete and metals. Laboratory exercises illustrate mechanical behavior of typical materials and demonstrate selected principles of mechanics.

3413 Geotechnical Engineering

(1-6) 3 hours credit. Prerequisite: EGR 3213.

Fundamental properties of soil and rock. Flow through porous media. The effective stress principle and computation of *in-situ* stress distributions. Strength and compressibility of geotechnical materials. Formerly CE 4213. Credit may not be obtained for both CE 4213 and CE 3413.

3603 Hydraulic Engineering

(1-6) 3 hours credit. Prerequisite: EGR 2503.

Fluid properties, fluid statics; concepts and equations of fluid flow in pipes and open channels. Flow through porous media.

3633 Water and Wastewater Treatment

(2-3) 3 hours credit. Prerequisite: Credit for or enrollment in CE 3603.

The application of chemical, biochemical, physical and mathematical processes to water treatment, wastewater treatment and pollution control. Credit may not be obtained for both CE 4633 and CE 3633.

3713 Civil Engineering Systems Analysis

(2-3) 3 hours credit. Prerequisites: MAT 3253 and EGR 3713.

Introduction to systems approach to problem solving. Application of operations research in civil engineering; mathematical modeling and analysis techniques including marginal analysis, linear programming, and dynamic programming. Formerly CE 4713. Credit may not be obtained for both CE 4713 and CE 3713.

4113 Transportation Systems

(3-0) 3 hours credit. Prerequisite: Credit for or enrollment in EGR 3713.

Planning, design, construction, operation and maintenance of transportation systems; concepts of various modes of transportation.

4123 Highway Engineering

(2-3) 3 hours credit. Prerequisite: Senior standing in Civil Engineering.

General characteristics of highway design. Horizontal and vertical alignment, cross-sections, earthwork, drainage, pavement. Economic analysis.

4223 Earth Structures

(2-3) 3 hours credit. Prerequisite: CE 3413.

Stability, strength, and deformation characteristics of engineering structures in and on geotechnical materials.

4313 Computer-Aided Design In Civil Engineering

(2-3) 3 hours credit. Prerequisite: Senior standing in Civil Engineering.

Organization and programming of civil engineering problems for computer solutions. Application of commercially available design software.

4323 Urban Engineering Design

(2-3) 3 hours credit. Prerequisites: EGR 3713 and CE 3713.

Planning analysis and design of civil engineering systems for the urban environment, public transportation, traffic, water supply and treatment. Projection of growth patterns, financing prioritization and implementation. Integration of public and private sector facilities.

4413 Foundation Engineering

(3-0) 3 hours credit. Prerequisite: CE 4213.

Design of foundations and earth retaining structures; study of earth-pressure theories.

4513 Advanced Structural Analysis

(2-3) 3 hours credit. Prerequisite: CE 3113.

Digital computer analysis of linear structural systems. Theoretical basis for modern computer programs. Application of several standard programs for a variety of structures.

- 4523 Advanced Reinforced Concrete Design**
(2-3) 3 hours credit. Prerequisite: CE 3213.
Design of reinforced concrete buildings by ultimate strength methods. Pre-stressed concrete design.
- 4543 Construction Planning**
(2-3) 3 hours credit. Prerequisite: Credit for or enrollment in EGR 3713.
Planning and managing, scheduling, and control of construction projects. Topics include management functions, network techniques, equipment selection, management, and operation, construction financing, bidding strategy, risk assessment, cost control, and projection.
- 4603 Water Resources Engineering**
(1-6) 3 hours credit. Prerequisite: CE 3603.
Analysis and design of surface and subsurface water resource systems; stream and river flow; dam and reservoir design for recharge, flood control and water supply; groundwater system recharge, percolation and subterranean flow; and harbour and shore hydraulic structures.
- 4623 Municipal and Rural Sanitation**
(2-3) 3 hours credit. Prerequisite: CE 3603.
An examination of sanitation practices in rural and urban environments including insect and rodent control, swimming pool sanitation, rural water supply, food sanitation, and disease transmission. Credit cannot be earned for any two of CE 3673, BIO 3233, and CE 4623.
- 4643 Air Pollution and Industrial Hygiene**
(2-3) 3 hours credit. Prerequisites: CHE 1303 and upper-division standing.
Discussion of the sources, quantities, effects of sampling and control of airborne pollutants in ambient air, and in urban and industrial environments. Credit cannot be earned for AS 4643 and CE 4643.
- 4653 Design of Water Pollution Control Systems**
(1-6) 3 hours credit. Prerequisite: CE 3633.
Analysis, synthesis, design, and system optimization of integrated processes and operations to handle and treat water and wastewater.
- 4813 Civil Engineering Design**
(1-6) 3 hours credit. Prerequisites: CE 3213, CE 3233, CE 3413, CE 3603 and CE 3633.
Opportunity to apply design skills to execution of an integrated civil engineering design project, including field and laboratory investigations, numerical and scale modeling, design and formal oral and written presentation of results.
- 4911-3 Independent Study**
1-3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student's advisor, the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to the bachelor's degree.
- 4953 Special Studies in Civil Engineering**
3 hours credit. Prerequisite: Consent of instructor.
An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

COURSE DESCRIPTIONS

ELECTRICAL ENGINEERING (EE)

- 2013 Introduction to Electrical Engineering Laboratory**
(1-6) 3 hours credit. Prerequisites: Credit for or enrollment in EE 2423 and EE 2513. Introduction to electrical engineering laboratory tools. Measurement theory, computer-aided analysis and software techniques.
- 2112 Introductory Digital Laboratory**
(0-6) 2 hours credit. Prerequisite: Concurrent enrollment in EE 2513. Introductory digital laboratory for Computer Science students enrolled in EE 2513. Not open to EE majors.
- 2423 Network Theory I**
(3-0) 3 hours credit. Prerequisite: Credit for or enrollment in MAT 3253. Basic network principles; steady state responses to DC and AC signals; transient responses; nodal and loop analysis. Formerly EE 2424. Credit may not be obtained for both EE 2424 and EE 2423.
- 2513 Logic Design**
(3-0) 3 hours credit. Prerequisite: Electrical Engineering or Computer Science major. Number systems, Boolean Algebra, combinational and sequential circuit design. Minimization and implementation. Formerly EE 2514. Credit may not be obtained for both EE 2514 and EE 2513.
- 3113 Electrical Engineering Laboratory I**
(1-6) 3 hours credit. Prerequisite: EE 3313. Experiments with discrete electronic devices and circuits. Laboratory techniques, computer-assisted analysis and design tools.
- 3213 Electromagnetic Engineering**
(3-0) 3 hours credit. Prerequisites: EE 2423 and MAT 3253. Analysis and design of electromagnetic systems. Applications of Maxwell's equations.
- 3313 Electronic Circuits I**
(3-0) 3 hours credit. Prerequisites: EE 2423 and credit for or enrollment in EE 3423 or ME 3323. Electrical properties of semiconductors; P-N junctions; diode circuits; BJT's, FET's; application to digital and analog circuits.
- 3401 Network and Electronics Lab**
(0-3) 1 hour credit. Prerequisite: Credit for or enrollment in EE 3313. Basic experiments with electrical networks and electronic circuits. Not open to EE majors. Formerly EE 3502. Credit may not be obtained for both EE 3502 and EE 3401.
- 3413 Analysis and Design of Control Systems**
(3-0) 3 hours credit. Prerequisite: EE 3423 or ME 3323. Modeling, analysis, and design of linear automatic control systems. Time and frequency domain techniques; stability analysis, state variable techniques, other topics. Formerly EE 4413. Credit may not be obtained for both EE 4413 and EE 3413.
- 3423 Network Theory II**
(3-0) 3 hours credit. Prerequisites: EE 2423 and MAT 3253. Circuit analysis by transform-, frequency-, and time-domain techniques. Polyphase circuits. Computer methods for network analysis and design.
- 3463 Microcomputer Systems I**
(3-0) 3 hours credit. Prerequisites: EE 2013, EE 2513 and credit for or enrollment in EE 3313. Introduction to microprocessor based system design. Architecture, peripherals, assembly language, operating system interfacing principles, and development tools. Formerly EE 4563. Credit may not be obtained for both EE 4563 and EE 3463.

3513 Electromechanical Systems

(3-0) 3 hours credit. Prerequisites: EE 3313 and MAT 3253.

Principles of electromechanical energy conversion; polyphase circuits; dynamic analysis of energy-transfer devices; power devices.

3563 Digital Systems Design I

(3-0) 3 hours credit. Prerequisites: EE 2513, and either CS major or credit for or enrollment in EE 3313.

Introduction to switching theory. Design of complex combinational and sequential circuits. Analysis of hazards and fault detection, location, and tolerance. Computer-aided design.

4113 Electrical Engineering Lab II

(1-6) 3 hours credit. Prerequisites: EE 3113, EE 3463 and EE 4313.

Measurement system analysis and design. Application of advanced instrumentation to test and evaluation of circuit designs. System design and the design process.

4233 Digital Laboratory

(1-6) 3 hours credit. Prerequisite: EE 3563.

Topics selected to support design, implementation, and test of digital circuits and systems. Formerly EE 3573. Credit may not be obtained for both EE 3573 and EE 4233.

4243 Digital Systems Design II

(2-3) 3 hours credit. Prerequisites: EE 3463 and EE 3563.

Design of advanced state machines and computer systems. Processor design. Simulation and other computer-assisted design tools. Formerly EE 3583. Credit may not be obtained for both EE 3583 and EE 4243.

4313 Electronic Circuits II

(3-0) 3 hours credit. Prerequisites: EE 3313, EE 3423 and EE 3563.

Multiple transistor circuits; feedback and frequency response analysis; operational amplifier analysis and design; power semiconductors; other topics. Design of analog and digital circuits.

4333 Instrumentation Systems

(2-3) 3 hours credit. Prerequisites: EE 3463, EE 3413 and credit for or enrollment in EE 4113.

Principles of instrumentation system design, transducers, power supplies, and signal conditioning. Noise analysis and reduction techniques. Standard protocol instrumentation buses.

4343 Active Filter Synthesis

(2-3) 3 hours credit. Prerequisite: EE 4313.

Analysis and design of active filter networks. Sensitivity analysis and filter design techniques. Passive synthesis, switched capacitor filters, other topics.

4443 Discrete-Time and Computer-Controlled Systems

(2-3) 3 hours credit. Prerequisites: EE 3413 and credit for or enrollment in EE 4643.

Sampled-data techniques applied to the analysis and design of digital control systems. Stability criteria, compensation, other topics.

4453 Principles of Bioengineering and Bioinstrumentation

(2-3) 3 hours credit. Prerequisites: EE 3213, EE 3413 and credit for or enrollment in EE 4113.

Theoretical basis for signal generation, transmission, and detection from biological systems. Modeling of biological systems. Electrodes and transducer systems; signal excitation and processing instrumentation.

4513 LSI and VLSI Design

(2-3) 3 hours credit. Prerequisites: EE 3213, EE 4313 and credit for or enrollment in EE 4243 or EE 4583.

Design of integrated digital systems. Logic simulation, standard cell libraries, circuit simulation, and other computer-aided design tools. Integrated circuit processing and device modeling.

4523 Integrated Circuit Design

(2-3) 3 hours credit. Prerequisites: EE 3213 and EE 4313.

Analysis and design of analog and digital integrated circuits. Integrated circuit technologies, computer-aided analysis, design, and other tools. Fabrication and testing.

4573 Engineering Workstations

(2-3) 3 hours credit. Prerequisites: EE 3463 and EE 3563.

Design and application of engineering workstations. Integration of components and peripherals to address specific engineering design support requirements. Networking considerations.

4583 Microcomputer Systems II

(2-3) 3 hours credit. Prerequisite: EE 3463.

Advanced microprocessor based system design. High-speed bus interfacing, coprocessors and other specialized input/output devices. Real-time and multi-user operating systems. High-level languages and software performance analysis.

4613 Communication Systems

(3-0) 3 hours credit. Prerequisites: STA 3533 and credit for or enrollment in EE 4313.

Fundamentals of communication systems engineering. Analog and digital techniques. Signal analysis, signal-to-noise ratio, circuit implementations.

4623 Digital Filtering

(2-3) 3 hours credit. Prerequisite: EE 4643.

Design and implementation of FIR and IIR filters; hardware and software. Introduction to adaptive filtering and image processing.

4643 Digital Signal Processing

(3-0) 3 hours credit.

Transform techniques for discrete signal analysis. Discrete representation and analysis of digital filters and other topics.

4653 Information Theory and Coding

(3-0) 3 hours credit. Prerequisites: EE 3463 and EE 4613.

Elements of information theory. Modulation and coding for efficient signaling and error correction. Block codes. Hardware and software implementation of encoders and decoders.

4683 Communication Laboratory

(1-6) 3 hours credit. Prerequisite: EE 4613.

Design and test of communication electronic circuits and systems.

4813 Electrical Engineering Design

(1-6) 3 hours credit. Prerequisites: EE 4113 and credit for or enrollment in EGR 3713.

Project-oriented, capstone course emphasizing the formulation, analysis, design, fabrication, and evaluation of engineering design problems. Team design, technical communication skills, and business planning.

4911-3 Independent Study

1-3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, and the Division Director and Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to the bachelor's degree.

4953 Special Studies in Electrical Engineering

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

COURSE DESCRIPTIONS
MECHANICAL ENGINEERING
(ME)

- 3241 Materials Engineering Laboratory**
 (0-3) 1 hour credit. Prerequisite: Credit for or enrollment in ME 3243.
 Investigation of the properties of engineering materials with emphasis on metals; sample preparation, metallography, foundry processes.
- 3243 Materials Engineering**
 (3-0) 3 hours credit. Prerequisite: Credit for or enrollment in EGR 3213.
 Fundamental aspects of the structure, properties and behavior of engineering materials.
- 3263 Materials Processing**
 (2-3) 3 hours credit. Prerequisites: ME 3243 and EGR 2503.
 Casting, joining, forming and machining. Methods of processing modern engineering materials, forming and joining techniques and effects of processing on materials.
- 3283 Fundamentals of Thermal Sciences**
 (3-0) 3 hours credit. Prerequisite: Credit for or enrollment in MAT 3253. Not open to students majoring in mechanical engineering. May not be substituted for ME 3293 or ME 4313.
 Introduction to classical thermodynamics and heat transfer; thermodynamics systems, equations of state, first and second law of thermodynamics, thermodynamic cycles; modes of heat transfer, diffusion equation, application of conduction, and convection and radiation heat transfer.
- 3293 Thermodynamics I**
 (3-0) 3 hours credit. Prerequisites: Credit for or enrollment in EGR 2503.
 Heat, work, kinetic theory of gases, equation of state, thermodynamics system, control volume, first and second law of thermodynamics, reversible and irreversible processes, introduction to basic thermodynamic cycles.
- 3313 Measurements and Instrumentation**
 (2-3) 3 hours credit. Prerequisites: EE 2423, EGR 2503, and MAT 3253.
 Fundamentals of measurement systems; standards, treatment of data; transducers, signal conditioning; strain, force, acceleration, pressure, temperature, fluid flow.
- 3323 Dynamics of Mechanical Systems**
 (2-3) 3 hours credit. Prerequisites: EGR 2503, EGR 3213, and MAT 3253.
 Mechanical system dynamics, linear systems, modeling techniques, analytical dynamics and vibrations.
- 3503 Alternative Energy Sources**
 (3-0) 3 hours credit. Prerequisite: ME 3293.
 Solar, nuclear, wind, geothermal and tidal energy. Energy storage problems. Principles, current technology, and economic considerations.
- 3513 Mechanism Design**
 (2-3) 3 hours credit. Prerequisite: EGR 2503.
 Kinematic synthesis, graphical and analytical methods, displacement, velocity, and acceleration analyses; dynamics of mechanism; and cam design.
- 3523 Machine Element Design**
 (3-0) 3 hours credit. Prerequisites: EGR 3213, ME 3243, and credit for or enrollment in ME 3513.
 Stress and deflection analyses, failure theories, design of machine elements for static and fatigue strength, and design of welded and bolted connections.
- 3663 Fluid Mechanics**
 (3-0) 3 hours credit. Prerequisites: EGR 2503 and credit for or enrollment in ME 3293.
 Fluid properties; fluid statics, concepts and equations of fluid flow; similitude; viscous effects; compressible fluid flow.

- 4243 Intermediate Materials Engineering**
(3-0) 3 hours credit. Prerequisites: ME 3243, ME 3241 and ME 3523.
Selected topics in ceramics, polymers; introduction to composites, fracture mechanics and corrosion; engineering design applications in material selection for control of fracture, deflection, wear and corrosion.
- 4263 Nondestructive Evaluation**
(2-3) 3 hours credit. Prerequisites: ME 3243 and ME 3313.
Defect detection, materials and defect characterization using nondestructive evaluation methods such as ultrasonics, eddy current, magnetic and electromagnetic methods, radiography, thermography.
- 4293 Thermodynamics II**
(3-0) 3 hours credit. Prerequisites: ME 3293, and credit for or enrollment in ME 3663.
Nonreactive and reactive mixtures, vapor and gas power cycles, refrigeration, and compressible flow.
- 4313 Heat Transfer and Rate Processes**
(3-0) 3 hours credit. Prerequisites: MAT 3253, ME 3293 and credit for or enrollment in ME 3663.
Generalized potential distribution and gradients; transient and steady heat conduction; forced and free convection; radiation, energy, and momentum transfers.
- 4323 Thermal Systems Design I**
(2-3) 3 hours credit. Prerequisite: Credit for or enrollment in ME 4313.
Application of basic thermodynamics, fluid mechanics, heat transfer and computer methods to the design of heat exchanger systems.
- 4333 Thermal Systems Design II**
(2-3) 3 hours credit. Prerequisite: Credit for or enrollment in ME 4313.
Design of thermal energy systems; coils, fans, pumps, and filter systems; automatic control systems.
- 4343 Heating, Air Conditioning, and Refrigeration Design**
(2-3) 3 hours credit. Prerequisite: Credit for or enrollment in ME 4313.
Heating, ventilation, and air conditioning of buildings for human comfort or industrial processes; design selection, construction and operation of air conditioning equipment and refrigeration systems.
- 4353 Gas Dynamics**
(3-0) 3 hours credit. Prerequisites: ME 3293 and ME 3663.
Application of mass, energy and force balance to compressible fluids, treatment of one-dimensional steady and transient flows, isentropic flow, adiabatic flow, flow with friction. Application to duct flows and to jet and rocket propulsion engines.
- 4363 Intermediate Heat Transfer**
(3-0) 3 hours credit. Prerequisite: ME 4313.
Multidimensional heat conduction, numerical solutions, selected topics in natural convection, boiling and condensation heat transfer, thermal storage systems.
- 4503 Intermediate Dynamics**
(3-0) 3 hours credit. Prerequisite: ME 3323.
Three-dimensional rigid-body kinetics, vector algebraic and Lagrange methods; integration of equations of motion; computer-assisted methods.
- 4513 Mechanical Vibrations and Dynamics of Machinery**
(3-0) 3 hours credit. Prerequisites: ME 3323 and MAT 3263.
Free and forced single and multiple degree of freedom systems modeled as both discrete and continuous. Applications in mechanical engineering design problems in the transmission and control of vibration.
- 4522 Dynamic Systems and Control**
(1-4) 2 hours credit. Prerequisites: EE 3313, ME 3323, and MAT 3263.
Introduction to modeling and control of dynamic physical systems, analysis and design of control systems for mechanical, electrical, fluid and thermal systems. Formerly ME 3353. Credit may not be obtained for both ME 3353 and ME 4522.

- 4533 Mechanical Engineering Design Methodology**
 (2-3) 3 hours credit. Prerequisites: ME 3323, ME 3523, ME 3663, and credit for or enrollment in ME 4313.
 Mechanical systems component design methodology; creative design, analysis, synthesis, selection, design of components and systems; computer-aided design; and several short design projects. Formerly ME 3533. Credit may not be obtained for both ME 3533 and ME 4533.
- 4603 CAD Methodology**
 (1-5) 3 hours credit. Prerequisite: ME 3523.
 Advanced geometric modeling of mechanical systems and components, design case studies, and finite element applications in mechanical design.
- 4613 Power Systems Design**
 (2-3) 3 hours credit. Prerequisites: ME 4293.
 Application of basic fluid mechanics to the design of turbomachinery, turbines, pumps, compressors, fans, blowers, windmills, and combustion engines.
- 4663 Intermediate Fluid Mechanics**
 (3-0) 3 hours credit. Prerequisite: ME 3663.
 Continuation of ME 3663. Potential flow theory, analysis of laminar and turbulent flows; introduction to boundary layer theory, and application of basic equations to engineering problems.
- 4703 Computer Applications in Mechanical Engineering**
 (2-3) 3 hours credit. Prerequisites: ME 3523, ME 4293, and credit for or enrollment in ME 4313.
 Application of computers in mechanical and thermal design; software package development; program development includes: fluid flow and mechanical property characterization, and heat transfer determination.
- 4713 Robotics and Expert Systems**
 (2-3) 3 hours credit. Prerequisites: EE 3313; and credit for or enrollment in ME 4522 or EE 4413.
 Design and industrial application of robots; expert systems; stereometry; machine vision, artificial intelligence.
- 4723 Reliability and Quality Control In Engineering Design**
 (3-0) 3 hours credit. Prerequisite: Senior Standing in the Division of Engineering.
 Introduction to statistical methods in reliability and probabilistic engineering design methodology; statistical quality control and inspection; life prediction and testing, and design optimization.
- 4802 Mechanical Engineering Senior Laboratory**
 (0-6) 2 hours credit. Prerequisites: ME 3313, ME 3523, ME 4293, and credit for or enrollment in ME 4313.
 An experimental laboratory concerned with fluid statics, fluid flow, heat transfer, internal combustion engines, and rotating machinery, and design of experiments.
- 4813 ME Design Project**
 (1-5) 3 hours credit. Prerequisites: EGR 3713, ME 3523, ME 4293, and ME 4313.
 Significant development of instructor-approved individual and/or group design project. Synthesis, modeling, computer-aided analysis and optimization. Industrial cooperation encouraged. Formal presentation of progress and final reports.
- 4911-3 Independent Study**
 1-3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student's advisor, and the Division Director and Dean of the College in which the course is offered.
 Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to the bachelor's degree.
- 4953 Special Studies in Mechanical Engineering**
 3 hours credit. Prerequisite: Consent of instructor.
 An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

DIVISION OF LIFE SCIENCES

The Division offers a Bachelor of Science Degree in Biology, with emphasis in molecular cell biology and neurobiology, as well as joint degree programs with The University of Texas Health Science Center at San Antonio, leading to the Bachelor of Science Degree in Medical Technology, Occupational Therapy, or Physical Therapy. Degrees in these three Allied Health programs are awarded jointly by both institutions. Also available are pre-professional courses which offer the students the opportunity to prepare for admission to medical, dental, nursing, and other professional schools.¹¹

The B.S. Degree in Biology is structured around a comprehensive core curriculum and related offerings in chemistry, physics, and mathematics which lead to more highly specialized areas in the life sciences, such as biochemistry, cellular biology, developmental biology, ecology, neurobiology, genetics, microbiology, molecular biology, and physiology.

The B.S. Degree in Medical Technology is a joint degree between The University of Texas at San Antonio and The University of Texas Health Science Center at San Antonio. The preclinical curriculum includes general education requirements, basic science lecture and laboratory courses and medical technology courses. Medical technology concepts are introduced throughout the curriculum, ending in a senior year clinical rotation at the Health Science Center. Upon completion of all requirements the student is eligible to take one of the medical technology national board examinations.

The B.S. Degree in Occupational Therapy offers the opportunity for the student to gain a strong background in the life sciences, behavioral sciences, humanities, and special skill areas. Specific application of occupational therapy skills in laboratory and clinical settings occurs in the last two years of a student's program and includes a minimum of six months approved field work experience. Students who have completed all degree requirements and their field work are eligible to take the national examination for registration with the American Occupational Therapy Association. An additional fieldwork placement course (OCCT 40876) is optional.

The B.S. Degree in Physical Therapy offers the opportunity for students to utilize the basic sciences necessary to evaluate and treat human movement disorders. Clinical observation and field work experiences are integrated into the academic preparation during the professional phase of the program. This program is fully accredited by the American Physical Therapy Association and graduates are eligible to take the Physical Therapy licensure examination following successful completion of this joint degree program.

BACHELOR OF SCIENCE DEGREE IN BIOLOGY

The minimum number of semester hours required for the Bachelor of Science Degree in Biology, including the 42 hours of General Education Requirements, is 126.¹² All candidates for the degree must complete:

- A. 48 semester hours in the *major*, 32 of which must be at the upper-division level.
 - 1. 30 semester hours in the Biology Core Curriculum are required:
 - BIO 1103, 1112 Principles of Biology and Laboratory
 - BIO 2313, 2322 Genetics and Laboratory
 - BIO 3413, 3422 General Physiology and Laboratory
 - BIO 3513, 3522 Biochemistry and Laboratory

¹¹Specific premedical, predental, and prenursing programs are not offered at UT San Antonio. Admission requirements for these professional schools are outlined in the Appendix of this catalog. Additional information can be obtained from the Office of the Division of Life Sciences and through the Chairman of the Health Related Professions Advisory Committee of The University of Texas at San Antonio.

¹²Thirty-nine of the total semester hours required for the degree must be at the upper-division level.

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and two of the following with laboratories:

- BIO 3143, 3152 Developmental Biology
- BIO 3283, 3292 Principles of Ecology
- BIO 3713, 3722 Microbiology
- BIO 3813, 3822 Cellular Biology
- BIO 4433, 4442 Neurobiology

2. 18 additional semester hours of Biology electives are required, 12 of which must be at the upper-division level.

B. 24 semester hours minimum of support work.

1. 13 semester hours are required in Chemistry:

- CHE 1103 Introductory Chemistry
- CHE 1303 Chemical Principles
- CHE 1312 Inorganic Qualitative and Quantitative Analysis
- CHE 2203 Organic Chemistry I
- CHE 2242 Organic Chemistry I Laboratory

2. 3 semester hours minimum in addition to the 3 semester hours required under the General Education Requirements are required in Mathematics:

- MAT 1214 Calculus I
- or
- STA 1993 Statistical Methods for the Life and Social Sciences

3. 8 semester hours are required in Physics:

- PHY 1603, 1611 General Physics I and Laboratory
- PHY 1623, 1631 General Physics II and Laboratory

C. 12 semester hours of electives, 7 of which must be at the upper-division level.

UTSA/UTHSC JOINT BACHELOR OF SCIENCE DEGREE IN MEDICAL TECHNOLOGY

Certain specific physical skills and abilities are required to successfully participate in the Medical Technology Program. Students may wish to inquire regarding these physical requirements before seeking admission to the program or registering for specific courses in the program.

In the Joint Degree Program, medical technology courses are offered throughout the course of study, culminating in a concentrated clinical hospital experience at the University of Texas Health Science Center at San Antonio. During the sophomore and junior years students will enroll in classes on both the UTSA and UTHSC campuses. All MEDT courses are taught at the Health Science Center and appear in a separate listing.

For consideration for admission into the professional phase of the Joint Degree Program the student must complete a separate application form which may be obtained from the Registrar's Office at The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, Texas 78284. This application should be submitted by May.15 of the student's sophomore year. Admission to the professional phase of the Joint Degree Program is on a competitive basis. Minimum requirements include 60 hours of college work, an overall GPA of 2.5, completion of at least one medical technology course and laboratory, and no grades lower than C in any basic science or medical technology course. Students will be notified of their status in the professional phase of the program during the summer semester following the sophomore year. The successful applicant then must complete two regular semesters of academic work before the clinical practicums begin. Admission to the professional

phase and successful continuation in the program will provide the student with a clinical training position at the Health Science Center teaching affiliates, Medical Center Hospital, the Audie Murphy Veteran's Administration Hospital, Southwest Texas Methodist Hospital, and King William Health Care Center.

The Medical Technology Program is accredited by the Committee on Allied Health Education and Accreditation in cooperation with the National Accrediting Agency for Clinical Laboratory Sciences.

Upon successful completion of this joint degree program the student is eligible to take one of the national certification examinations. All students are encouraged to be counseled each semester by either the Medical Technology Program Director or a member of the Medical Technology faculty to ensure enrollment in appropriate course work.

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 146.

All candidates for the degree must complete:

A. 86 semester hours in the major.

1. 21 semester hours are required in the biological sciences.

- BIO 1103, 1112 Principles of Biology and Laboratory
- BIO 2313 Genetics
- BIO 3513, 3522 Biochemistry and Laboratory
- BIO 3713, 3722 Microbiology and Laboratory
- BIO 4743 Immunology

2. 6 semester hours are required in Allied Health Sciences:

- AHS 1883 Introduction to Medical Technology
- AHS 3463 Human Physiology

3.*59 semester hours are required in Medical Technology:

a. These courses are taken prior to clinical training:

- *MEDT 20351, 20252 Hematology and Laboratory
- *MEDT 20301, 20202 Parasitology and Urinalysis and Laboratory
- *MEDT 30361, 30262 Immunohematology and Serology and Laboratory
- *MEDT 30381, 30282 Clinical Chemistry and Laboratory
- *MEDT 30333, 30234 Medical Microbiology and Laboratory

b. These courses are the senior lecture and clinical experience courses:

- *MEDT 40333 Advanced Medical Microbiology
- *MEDT 40383 Advanced Clinical Chemistry
- *MEDT 40353 Advanced Hematology
- *MEDT 40255 Advanced Immunohematology
- *MEDT 40587 Chemistry Practicum
- *MEDT 40567 Immunohematology Practicum
- *MEDT 40557 Hematology Practicum
- *MEDT 40537 Microbiology Practicum
- *MEDT 40192 Education Techniques for the Medical Technologist
- *MEDT 40293 Management Techniques for Medical Technologists

B. 24 semester hours of support work.

1. 13 semester hours are required in Chemistry:

*Courses to be taken at The University of Texas Health Science Center at San Antonio.

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CHE 1103	Introductory Chemistry
CHE 1303	Chemical Principles
CHE 1312	Inorganic Qualitative and Quantitative Analysis
CHE 2203	Organic Chemistry I
CHE 2242	Organic Chemistry I Laboratory

2. 8 semester hours are required in Physics:

PHY 1603, 1611	General Physics I and Laboratory
PHY 1623, 1631	General Physics II and Laboratory

3. 3 semester hours are required in Statistics.

STA 1053	Basic Statistics
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**UTSA/UTHSC JOINT BACHELOR OF SCIENCE DEGREE
IN OCCUPATIONAL THERAPY**

The joint degree program in Occupational Therapy is fully accredited by the Committee on Allied Health Education and Accreditation of the American Medical Association in collaboration with the American Occupational Therapy Association (AOTA). Upon completion of this program, students are eligible to complete the certification examination offered by the AOTA, which is necessary for licensure in Texas and most other states.

Admission to the program is made through The University of Texas Health Science Center at San Antonio. Students should seek admission to the professional program only after completing all coursework necessary to meet general education as well as pre-professional (support work) requirements for the program. These may be completed at UTSA or another accredited college or university. However, non-UTSA students must be accepted for admission to The University of Texas at San Antonio prior to application to the professional program. Admission to UTSA does not assure admission to the Occupational Therapy Program. Students interested in an early admission decision should contact the program for information on the assured admission program. However, all students are encouraged to be counseled by a member of the occupational therapy faculty to ensure enrollment in appropriate pre-professional coursework. Appointments or information can be obtained by calling (512-567-3111).

Professional coursework begins in early June of each year and classes are conducted at The University of Texas Health Science Center campus. The professional program involves assignment to facilities in San Antonio and other cities for completion of supervised clinical rotations.

Application for admission to the professional phase of the program must be made by February 15th of the year admission is sought. The application process can be initiated by writing to: Registrar, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, Texas 78284. Students should assure that they have completed *both* general education as well as pre-professional (support work) requirements prior to making application. It is the responsibility of the applicant to arrange to have transcripts forwarded to the UTHSC Office of Admissions prior to February 15th of the year in which application is being made.

The minimum number of semester hours required for this degree, including General Education Requirements, is 165.

All candidates for the degree must complete:

- A. 113 semester hours in the major (which includes 36 semester hours in full-time fieldwork).

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1. 9 semester hours are required in the biological sciences:

BIO 1103, 1112 Principles of Biology and Laboratory
BIO 2123, 2131 Comparative Anatomy of Vertebrates and Laboratory
or
AHS 2083, 2091 Human Biology: Anatomy and Laboratory

2. 104 semester hours are required at The University of Texas Health Science Center at San Antonio.*

OCCT 30475 Kinesiology
OCCT 30251 Research in Occupational Therapy
OCCT 30401 Health and Occupation
OCCT 30331 Occupational Therapy in Physical Dysfunction
OCCT 30291 Skills Lab in Physical Dysfunction
OCCT 30271 Practicum in Physical Dysfunction
OCCT 40332 Occupational Therapy for Psychosocial Dysfunction
OCCT 40292 Skills Lab in Psychosocial Dysfunction
OCCT 40325 Design and Fabrication Skills
OCCT 30272 Practicum in Psychosocial Dysfunction
OCCT 40333 Occupational Therapy in Developmental Disabilities
OCCT 40223 Skills Lab in Developmental Dysfunction
OCCT 30273 Practicum in Developmental Dysfunction
OCCT 40382 Management and Consultation in Occupational
Therapy
OCCT 40326 Therapeutic Problem Solving
OCCT 30250 Assessment of Human Performance
OCCT 41274 Fieldwork in Physical Dysfunction
OCCT 41275 Fieldwork in Developmental Dysfunction
OCCT 41276 Fieldwork in Psychosocial Dysfunction
CSBL 30616 Gross Anatomy
PHYL 30412 Human Physiology
INDT 30471 Human Neurosciences
INDT 30203 Computers in Rehabilitation
PATH 30411 Introductory Pathology
MEDI 30211 Clinical Medicine I
MEDI 40212 Medical Management in Psychosocial Dysfunction
MEDI 40213 Clinical Medicine II

- B. 19 semester hours of support work.

1. 4 semester hours are required in Chemistry:

CHE 1003, 1011 General Chemistry for Allied Health Sciences
or
CHE 1103, 1122 Introductory Chemistry and Laboratory Workshop

2. 9 semester hours are required in Psychology:

PSY 2013 Fundamentals of Psychology
PSY 2503 Developmental Psychology
PSY 2513 Abnormal Psychology

3. 3 semester hours are required in Sociology:

SOC 1013 Introduction to the Study of Society

4. 3 semester hours are required in Statistics:

STA 1053 Basic Statistics

*Courses to be taken at The University of Texas Health Science Center at San Antonio.

UTSA/UTHSCSA JOINT BACHELOR OF SCIENCE DEGREE IN PHYSICAL THERAPY

The joint degree Program in Physical Therapy Education is fully accredited by the Committee on Accreditation of the American Physical Therapy Association. Upon completion of this four year program, students are eligible to take the licensure examination offered by the Professional Examination Service, which is required for practice in Texas.

Application to the program must be made by December 15 prior to the summer in which the student wishes to be admitted. This application process can be initiated by writing to:

Allied Health Admissions
The University of Texas Health Science Center
at San Antonio
7703 Floyd Curl Drive
San Antonio, Texas 78284

It should be noted that admission to the Program in Physical Therapy Education is competitive, and admission to UTSA does not guarantee admission into the professional phase of the curriculum.

Each student is expected to complete all General Education Requirements for graduation from UTSA, as well as program prerequisites for Physical Therapy, by June of the year of admission to the professional phase of the Physical Therapy Program. The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 152.

UTSA/UTHSCSA PROGRAM IN PHYSICAL THERAPY EDUCATION

All candidates for the degree must complete 122 semester hours of major and support work.

- A. 89 semester hours in the major at the upper division level.*

UTSA/UTHSCSA PROGRAM IN PHYSICAL THERAPY EDUCATION Curriculum Effective Class Graduating 1988

JUNIOR SUMMER

CSBL 30616	Gross Anatomy	6 credit hours
PHYL 30412	Human Physiology	4 credit hours
PHYT 30313	PT Patient Care & Application	3 credit hours

JUNIOR FALL

INTD 30475	Kinesiology & Application	4 credit hours
INTD 30471	Human Neuroscience	4 credit hours
PHYT 30321	Therapeutic Exercise I & Application	3 credit hours
PHYT 30315	PT Evaluation & Documentation	3 credit hours
PHYT 30335	Physical Agents & Application for PT	3 credit hours
PHYT 30202	Junior Clinical I	2 credit hours

JUNIOR SPRING

MEDI 30211	Clinical Medicine I	2 credit hours
PATH 30311	Pathology	3 credit hours
PHYT 30322	Therapeutic Exercise II & Application	3 credit hours
PHYT 30236	Clin. Electrotherapy & Applic. for PT	2 credit hours

*Courses to be taken at The University of Texas Health Science Center at San Antonio.

192 / UTSA/UTHSCSA Program in Physical Therapy Education

PHYT 30382	Administration & Management for PT	3 credit hours
PHYT 30208	Orthotics & Prosthetics for PT	2 credit hours
PHYT 30203	Junior Clinical II	2 credit hours

SENIOR SUMMER

PHYT 40323	Therapeutic Exercise III & Application	3 credit hours
PHYT 40216	Cardiopulmonary PT	2 credit hours
PHYT 40191	Independent Study for Seniors (optional)	1 credit hour
PHYT 40240	Growth & Development for PT	2 credit hours

SENIOR FALL

MEDI 40213	Clinical Medicine III	2 credit hours
PHYT 40294	Physical Therapy Research Methodology	2 credit hours
PHYT 40424	Therapeutic Exercise IV & Application	4 credit hours
PHYT 40337	Rehabilitation Management & Applic.	3 credit hours
PHYT 40671	Senior Clinical I	6 credit hours

SENIOR SPRING

PHYT 41672	Senior Clinical II	16 credit hours
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B. 33 semester hours of support work:

1. 4 semester hours of Human or Mammalian Anatomy with lab
 - AHS 2083 Human Biology: Anatomy
 - AHS 2091 Human Biology: Anatomy Lab
2. 4 semester hours of Human or Mammalian Physiology with lab
 - AHS 2103 Human Biology: Physiology
 - AHS 2111 Human Biology: Physiology Lab
3. 8 semester hours of Chemistry with labs (to include an organic component)
 - CHE 1003 General Chemistry for AHS
 - CHE 1011 General Chemistry for AHS Lab
 - CHE 1203 Elementary Organic and Biochemistry
 - CHE 1211 Elementary Organic and Biochemistry Lab
4. 8 semester hours of Physics with labs
 - PHY 1603 General Physics I
 - PHY 1611 General Physics I Lab
 - PHY 1623 General Physics II
 - PHY 1631 General Physics II Lab
5. 3 semester hours of Statistics
 - STA 1053
6. 3 semester hours of Psychology
 - PSY 2013
7. 3 semester hours of Sociology
 - SOC 1013

The UTSA equivalents of these courses are given. Courses completed at another institution that meet the requirements are acceptable.

COURSE DESCRIPTIONS
ALLIED HEALTH SCIENCES
(AHS)

- 1053 Introductory Microbiology**
(3-0) 3 hours credit. Prerequisite: BIO 1103 with BIO 1112 strongly recommended, or BIO 1013, or consent of instructor. May not be applied to a B.S. in Biology.
A general study of microorganisms, their characteristics, isolation, growth, and importance in nature, industry, public health and human disease.
- 1061 Introductory Microbiology Laboratory**
(0-3) 1 hour credit.
May not be applied to a B.S. in Biology.
- 1883 Introduction to Medical Technology**
(3-0) 3 hours credit. Prerequisite: CHE 1103 is recommended.
Overview of the profession of medical technology including the clinical laboratory and its functions, relationship of physiological and pathological specimens to body systems, and medical terminology and medical laboratory calculations.
- 2043 Nutrition**
(3-0) 3 hours credit. Prerequisites: BIO 1103, 1112; or AHS 2103.
An examination of human nutritional needs from infancy to adulthood.
- 2083 Human Biology: Anatomy**
(3-0) 3 hours credit. Prerequisite: BIO 1103 with BIO 1112 strongly recommended, or BIO 1013 or consent of instructor. May not be applied to B.S. in Biology.
The structure of human muscular, skeletal, nervous and organ systems.
- 2091 Human Biology: Anatomy Laboratory**
(0-3) 1 hour credit.
May not be applied to a B.S. in Biology.
- 2103 Human Biology: Physiology**
(3-0) 3 hours credit. Prerequisite: BIO 1103 with BIO 1112 strongly recommended, or BIO 1013 or consent of instructor. May not be applied to a B.S. in Biology.
Physiological processes in human systems.
- 2111 Human Biology: Physiology Laboratory**
(3-0) 1 hour credit.
- 3113 Kinesiology**
(3-0) 3 hours credit. Prerequisite: AHS 2083 or 2103 or consent of instructor. Primarily designed for students majoring in physical education.
A study of the principles of human motion.
- 3463 Human Physiology**
(3-0) 3 hours credit. Prerequisites: BIO 1103, 1112, CHE 2103 or 2203 or consent of instructor.
Physiological processes in human systems.
- 4783 Pathogenic Microorganisms**
(3-0) 3 hours credit. Prerequisites: BIO 3713 and 3722. A consideration of medically important microorganisms and their interaction with animal and human hosts.
- 4792 Pathogenic Microorganisms Laboratory**
(0-6) 2 hours credit.

COURSE DESCRIPTIONS
BIOLOGY
(BIO)

- 1013 Introduction to Life Sciences**
(3-0) 3 hours credit. May not be applied to a B.S. in Biology.
An introduction to the life sciences emphasizing general principles, diversity of life forms, reproduction and interrelationships between living things. Credit cannot be earned for both BIO 1013 and BIO 1103.

1103 Principles of Biology

(3-0) 3 hours credit. Concurrent enrollment: BIO 1112.

An introduction to living organisms emphasizing fundamentals of organization, reproduction, growth and interrelationships between various forms of life, including a brief survey of the plant and animal groups. Required for students majoring in Biology. Credit cannot be earned for both BIO 1013 and BIO 1103.

1112 Principles of Biology Laboratory

(0-6) 2 hours credit. Concurrent enrollment: BIO 1103.

2003 Human Sex and Reproduction

(3-0) 3 hours credit. Prerequisite: BIO 1013 or 1103 or consent of instructor. May not be applied to a B.S. in Biology.

Human reproductive anatomy and physiology, fertility control, reproductive disease, and parameters influencing fertility patterns.

2123 Comparative Anatomy of Vertebrates

(3-0) 3 hours credit. Prerequisites: BIO 1103 and 1112. A detailed study of anatomical differences and similarities of vertebrates with reference to evolutionary changes.

2132 Comparative Anatomy of Vertebrates Laboratory

(0-6) 2 hours credit.

2313 Genetics

(3-0) 3 hours credit. Prerequisites: BIO 1103, 1112, CHE 1103, and MAT 1013 or equivalent.

Principles governing transmission of hereditary factors in plants and animals with emphasis on molecular, biochemical and population genetics.

2322 Genetics Laboratory

(0-6) 2 hours credit. Optional for non-majors.

3003 Introduction to Oceanography

(3-0) 3 hours credit. Prerequisites: BIO 1103 and 1112, or BIO 1013 or consent of instructor.

General oceanography with emphasis on biological aspects and living marine resources.

3013 Introductory Pathology

(3-0) 3 hours credit. Prerequisites: BIO 1103, 1112 or BIO 1013 or AHS 2103.

Concepts of disease and diagnosis of pathological conditions.

3023 Drugs and Society

(3-0) 3 hours credit. Prerequisites: BIO 1103 and 1112, or BIO 1013 or consent of instructor.

An examination of drugs and their biosocial effects.

3033 Human Physiology and Performance

(3-0) 3 hours credit. Prerequisites: BIO 3413 or AHS 2103.

A systematic application of physiological principles to human equipment and space to improve adaptation and performance in the work environment.

3063 Invertebrate Biology

(3-0) 3 hours credit. Prerequisites: BIO 1103 and 1112.

A course offering the opportunity for a comprehensive study of the invertebrate animals with emphasis on their taxonomy, morphology, ecology, and evolution. Credit cannot be earned for BIO 2063 and BIO 3063.

3083 Biosocial Genetics

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

A study of human heredity and social issues with emphasis on inherited diseases, genetic problems and evolutionary change in relation to culture, diversity and mating systems.

3103 Biotechnology

(3-0) 3 hours credit. Prerequisite: BIO 1013 or 1103.

An introduction to recent advances in biology related to biotechnology. Discussion of how advances might be used to promote basic research in medicine, agriculture, and other industries.

- 3143 Developmental Biology**
(3-0) 3 hours credit. Prerequisites: BIO 1103 and 1112.
Sequential analysis of development in vertebrates and the factors which affect fertilization, organogenesis and implantation.
- 3152 Developmental Biology Laboratory**
(0-6) 2 hours credit.
- 3163 Histology and Cytology**
(3-0) 3 hours credit. Prerequisites: BIO 1103 and 1112.
The cytological and histological aspects of cellular organization.
- 3172 Histological and Cytological Laboratory**
(0-6) 2 hours credit.
- 3213 Animal Behavior**
(3-0) 3 hours credit. Prerequisites: BIO 1103 and 1112.
A detailed study of animal behaviors and their biological determinants.
- 3273 Biology of Flowering Plants**
(2-3) 3 hours credit.
A study of the wild flowers of Texas, emphasizing identification of the more common wild flowers, as well as family characteristics, flower anatomy, and plant morphology. Plant collecting techniques and wild flower photography will be included. Lecture, laboratory and field work will be included as part of the course.
- 3283 Principles of Ecology**
(3-0) 3 hours credit. Prerequisites: BIO 1103 and 1112 or consent of instructor.
The opportunity to study the interaction of organisms with their environment, ecological principles, adaptations of organisms, environmental pollution and principles of conservation.
- 3292 Principles of Ecology Laboratory**
(0-6) 2 hours credit.
A field-oriented course emphasizing modern ecological techniques, including examinations of plant and animal populations, and measurement of selected chemical and physical parameters.
- 3323 Evolution**
(3-0) 3 hours credit. Prerequisite: BIO 2313.
A discussion of theories and possible mechanisms for evolutionary changes at various levels of organization.
- 3343 Plant Sciences**
(3-0) 3 hours credit. Prerequisites: BIO 1103 and 1112.
A course offering the opportunity to study the life histories and phylogenetic relationships of vascular and non-vascular plants.
- 3351 Plant Sciences Laboratory**
(0-3) 1 hour credit.
- 3413 General Physiology**
(3-0) 3 hours credit. Prerequisites: BIO 1103, CHE 2003 and PHY 1623; recommended: MAT 1093.
Fundamental properties and processes in living systems.
- 3422 General Physiology Laboratory**
(0-6) 2 hours credit.
- 3513 Biochemistry**
(3-0) 3 hours credit. Prerequisites: CHE 2203, 2242; BIO 2313 recommended.
Introduction to biochemistry; amino acids; protein structures; enzyme action; lipids and saccharides; metabolism; nucleic acids and molecular biology.
- 3522 Biochemistry Laboratory**
(0-6) 2 hours credit.
Basic biochemical laboratory techniques: titration, protein purification, enzyme kinetics, chromatography, electrophoresis and centrifugation.

3533 Radiation Biology

(3-0) 3 hours credit. Prerequisites: BIO 2313 and 3713 or consent of instructor.
A study of the biological effects of ionizing and non-ionizing radiation and cellular repair of radiation damage.

3542 Radiation Biology Laboratory

(0-6) 2 hours credit.

3633 Human Environmental Physiology

(3-0) 3 hours credit. Prerequisites: BIO 3413 or AHS 2103.
Adaptive physiological responses to unusual environmental conditions.

3713 Microbiology

(3-0) 3 hours credit. Prerequisites: BIO 2313 and CHE 2203.
A comprehensive study of microorganisms including their composition, morphology, growth, metabolism, classification, ecology and significance in disease.

3722 Microbiology Laboratory

(0-6) 2 hours credit.

3733 Industrial Microbiology

(3-0) 3 hours credit. Prerequisites: BIO 3713 and 3722.
A study of genetic engineering of industrial microorganisms, industrial fermentation methodologies, quality control, and biotransformations used for the microbial manufacture of foods, beverages, antibiotics, enzymes, single-cell proteins and industrial chemicals.

3813 Cellular Biology

(3-0) 3 hours credit. Prerequisite: BIO 3413 or 3513.
A study of cellular function with relation to structure from the microscopic to molecular level.

3822 Cellular Biology Laboratory

(0-6) 2 hours credit.

4023 Environmental Toxicology

(3-0) 3 hours credit. Prerequisite: BIO 3413 or 3513.
Environmental toxicants will be studied in terms of bioavailability, bioaccumulation, biodegradation; toxicity and physiological processes.

4043 Desert Biology

(2-3) 3 hours credit. Prerequisites: BIO 3283 and 3292.
A study of the deserts of the world with an emphasis on U.S. deserts. Adaptations of plants and animals and their responses to desert conditions will be included, as well as examinations of desert climatic patterns, geology, and natural history. Lecture, laboratory and field work will be included.

4073 Law, Ethics and the Life Sciences

(3-0) 3 hours credit. Prerequisites: BIO 1013 or BIO 1103 and 1112, or consent of instructor.
Current developments in biology such as recombinant DNA, embryo transplants, life preserving processes, reproductive and population control, and the impact of biotechnology on enactment of new legislation and ethics in general.

4133 Fermentation Biotechnology

(3-0) 3 hours credit. Prerequisites: BIO 3513, 3522, 3713, and 3722.
A study of the scientific principles underlying brewing and other fermentation technology.

4203 Plant Ecology

(3-0) 3 hours credit. Prerequisite: BIO 3283, 3292, or consent of instructor.
A study of the major biomes of North America and Texas, including the chemical, physical and biological factors that influence the development of these biomes.

4221 Plant Ecology Laboratory

(0-3) 1 hour credit.
A course providing the opportunity for field-oriented study to examine qualitative and quantitative methods to evaluate plant communities.

- 4233 Field Biology**
(3-0) 3 hours credit. Prerequisites: BIO 1013, or BIO 1103 and 1112, or consent of instructor.
A study of the natural history of plants and animals in their native environment. Techniques for the identification of birds, mammals, reptiles, amphibians, insects, and the dominant flowering plants will be discussed.
- 4241 Field Biology Laboratory**
(0-3) 1 hour credit.
A field-oriented course offering the opportunity for practical experience observing, collecting and identifying Texas plants and animals.
- 4333 Population Genetics**
(3-0) 3 hours credit. Prerequisites: BIO 2313 and 2322.
A quantitative approach to the study of genetics systems in populations, including mutations, selection, polymorphism and mating systems.
- 4343 Molecular Genetics**
(3-0) 3 hours credit. Prerequisites: BIO 2313, 2322, 3513 and 3522.
Molecular approach to structure, replication, mutation and phenotypic expression of genetic material.
- 4353 Comparative Animal Physiology**
(3-0) 3 hours credit. Prerequisites: BIO 3413 and 3422.
A phylogenetic study of physiologic adaptation in animals.
- 4433 Neurobiology**
(3-0) 3 hours credit. Prerequisites: BIO 3413 and 3422.
Anatomy and physiology of nervous systems, the mechanisms of neuronal functions.
- 4442 Neurobiology Laboratory**
(0-6) 2 hours credit.
A laboratory course emphasizing principles presented in BIO 4433.
- 4453 Endocrinology**
(3-0) 3 hours credit. Prerequisites: BIO 3413, 3422, 3513 and 3522.
A consideration of the physiological effects of hormones on the organism in health and disease, together with a study of the gross and microscopic morphology of the glands of internal secretion.
- 4462 Endocrinology Laboratory**
(0-6) 2 hours credit.
A laboratory course emphasizing principles presented in BIO 4453.
- 4523 Intermediary Metabolism**
(3-0) 3 hours credit. Prerequisites: BIO 3513 and 3522.
A detailed consideration of metabolic pathways, energy metabolism and their regulation.
- 4603 Plant Physiology**
(3-0) 3 hours credit. Prerequisites: BIO 3343, 3351, CHE 2203 and 2242.
Principles of organization of cellular activity and molecular structure of protoplasm; nutrition, translocation, mineral metabolism, respiration and photosynthesis.
- 4611 Plant Physiology Laboratory**
(0-3) 1 hour credit.
A course providing qualitative and quantitative experiments in the study of plant physiology.
- 4723 Virology**
(3-0) 3 hours credit. Prerequisite: BIO 3713.
A study of the diversity of viruses and biochemical mechanisms for their replication.
- 4731 Virology Laboratory**
(0-3) 1 hour credit.
- 4743 Immunology**
(3-0) 3 hours credit. Prerequisites: BIO 3513 and 3522, or 3713 and 3722.
A study of the properties of antigens and antibodies, current concepts of humoral and cell-mediated immunity and the cells involved.

4752 Immunology Laboratory

(0-6) 2 hours credit.

4763 Parasitology

(3-0) 3 hours credit. Prerequisites: BIO 3713 and 3722.

A study of the animal parasites of humans and related hosts with emphasis on their epidemiology, life cycles, pathology and control.

4772 Parasitology Laboratory

(0-6) 2 hours credit.

4813 Brain and Behavior

(3-0) 3 hours credit. Prerequisite: BIO 1013 or 1103, or consent of instructor.

Basic physiological functions of the brain and how they relate to behavior.

4911-3 Independent Study

1-3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, and the Division Director and Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the bachelor's degree.

4953 Special Studies in Biology

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4963 Seminar in Biology

(3-0) 3 hours credit. Prerequisite: Junior or senior standing with a minimum of 20 hours in biological sciences.

An undergraduate seminar limited to biology majors, which provides an opportunity to survey selected biological topics through presentation and discussion of relevant contemporary research and literature. May not be repeated for credit.

4972 MBRS-MARC Symposium

(2-0) 2 hours credit. Prerequisite: BIO 1103 or CHE 1103, or consent of instructor.

A course involving presentations at the frontiers of chemistry, biochemistry, biophysics and biology, including genetics, microbiology, physiology, and other areas.

4993 Honors Research

3 hours credit. Prerequisite: Enrollment limited to candidates for College Honors during their last two semesters; approval by the College Honors Committee.

Supervised research and preparation of an honors thesis. May be repeated once with approval.

DIVISION OF MATHEMATICS, COMPUTER SCIENCE, AND STATISTICS

The division offers a Bachelor of Science Degree in Computer Science in which the student may select a concentration in Software or a concentration in Hardware. The division also offers a Bachelor of Science Degree in Mathematics in which the student may select a concentration in Mathematics, a concentration in Statistics or a concentration in Mathematics Education.

BACHELOR OF SCIENCE DEGREE IN COMPUTER SCIENCE

The Bachelor of Science Degree in Computer Science is offered with two concentrations:

Concentration 1.	Hardware Option
Concentration 2.	Software Option

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 126.

All majors in computer science are required to complete with a grade of C or better any lower-division CS and EE courses (CS 1711, 1713, 1723, 2733, 2743, EE 2513, 2112) which are prerequisites for other lower- and upper-division courses prior to enrolling in those respective courses.

1. All candidates for the Bachelor of Science degree in Computer Science, regardless of concentration, must complete the following: 54 semester hours of required courses (which includes the 9 hours of General Education Requirements in Sciences and Engineering).

The student who is not prepared to begin MAT 1214 must take MAT 1093, Pre-calculus or MAT 1153, Analytic Geometry.

CS	1711	Introduction to Computer Science Laboratory
CS	1713	Introduction to Computer Science
CS	1723	Data Structures I
CS	2733	Introduction to Computer Organization
CS	2743	Data Structures II
CS	3321	Topics in Programming Languages: C
CS	3321	Topics in Programming Languages: Ada
CS	3321	Topics in Programming Languages: Lisp
CS	3733	Operating Systems
CS	4753	Computer Architecture
EE	2513	Logic Design
EE	2112	Introductory Digital Laboratory
MAT	1214	Calculus I
MAT	1223	Calculus II
MAT	2213	Calculus III
MAT	2233	Linear Algebra
STA	3513	Probability and Statistics
STA	3523	Statistical Methods
ENG	2413	Technical Writing
PHY	1904	Technical Physics I
PHY	1911	Technical Physics I Laboratory

**200 / Bachelor of Science Degree in Computer Science
Bachelor of Science Degree in Mathematics**

2. 12 semester hours in one of the two concentrations below.

A. Software Option

- CS 3233 Discrete Mathematical Structures
- CS 3723 Programming Languages
- CS 3743 Data Base Management
- CS 3773 Programming Methodology

B. Hardware Option

- EE 3563 Digital Systems Design I
- EE 4233 Digital Laboratory
- CS 4803 Microprocessor Laboratory
- CS 4853 Computer Interfaces

3. 27 semester hours, 9 of which must be upper-division hours in the Division of Mathematics, Computer Science, and Statistics, and 18 of which must be elective hours.

BACHELOR OF SCIENCE DEGREE IN MATHEMATICS

The Bachelor of Science Degree in Mathematics is offered with three concentrations:

- | | |
|------------------|-----------------------|
| Concentration 1. | Mathematics |
| Concentration 2. | Statistics |
| Concentration 3. | Mathematics Education |

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 126¹³. Students choosing Concentration 3, should satisfy the General Education Requirements consistent with the Texas Certification Program.

All candidates for the Bachelor of Science degree in Mathematics, regardless of concentration, must complete the following 32 semester hours of required courses (which may include the 6 hours of General Education Requirements in Sciences and Engineering).

The student who is not prepared to begin MAT 1214 must take MAT 1093, Pre-calculus or MAT 1153, Analytic Geometry.

- MAT 1214 Calculus I
- MAT 1223 Calculus II
- MAT 2213 Calculus III
- MAT 2233 Linear Algebra
- MAT 2243 Foundations of Mathematics
- MAT 3213 Foundations of Analysis
- STA 3513 Probability and Statistics
- STA 3523 Statistical Methods
- CS 1711 Introduction to Computer Science Laboratory
- CS 1713 Introduction to Computer Science
- CS 1723 Data Structures I

In addition, a candidate for the Bachelor of Science in Mathematics degree must complete the course requirements for the concentration declared by the candidate.

¹³Thirty-nine of the total semester hours required for the degree must be at the upper-division level.

Students seeking teacher certification should consult the Undergraduate Certificate Programs in Education brochure for information.

1. Concentration in Mathematics

A. Required Courses: 21 semester hours.

MAT 3223 Complex Variables
MAT 3243 Calculus for Application
MAT 3613 Differential Equation I
MAT 3633 Numerical Analysis I
MAT 4213 Real Analysis I
MAT 4223 Real Analysis II
MAT 4233 Modern Abstract Algebra I

B. An additional 9 semester hours of upper division courses in the Division of Mathematics, Computer Science, and Statistics.

C. Electives, 28 semester hours.

2. Concentration in Statistics

A. Required Courses: 21 semester hours.

MAT 3633 Numerical Analysis I
MAT 4213 Real Analysis I
STA 3013 Multivariate Analysis for the Life and Social Sciences
STA 3433 Applied Non-Parametric Statistics
STA 4643 Introduction to Stochastic Processes
STA 4713 Applied Regression Analysis
STA 4723 Design and Analysis of Experiments

B. 9 additional hours of approved courses in the Division of which 3 hours may be in the 2000 level. The other 6 hours must be at the 3000 level or above.

C. Electives, 28 semester hours.

3. Concentration in Mathematics Education.

A. Required Courses in Mathematics: 12 semester hours

MAT 3233 Modern Algebra
MAT 4263 Geometry

Any 6 approved semester hours in MAT with a course number of 3000 or above.

B. Required Academic Foundations: 10 semester hours.

COM 1043 Introduction to Communication

Six semester hours of English elective

One hour science lab associated with science course taken to fulfill general education requirements.

C. Required Courses in Professional Education (24 hours).

C&I 3003 The Secondary School Curriculum

EDP 3003 Introduction to Educational Psychology

EDU 3003 Educational Sociology

EDU 3013 The School Environment and Learning Resources

EDU 4093 Teaching in the Secondary School

EDU 4049 Student Teaching: Secondary

or

EDU 4059 Student Teaching: Secondary-ESL

NOTE: C&I 3003, EDP 3003, EDU 3003 and EDU 3013 must be completed prior to the student teaching semester. EDU 4093 and EDU 4049 or 4059 comprise the Education Professional Semester and Student Teaching. Students must apply to student teach one se-

**202 / Bachelor of Science Degree in Mathematics
Computer Science**

semester in advance. For complete information on all requirements, contact the Director of Student Teaching.

D. Electives: 12 semester hours

NOTE: Individuals pursuing teaching certification may use the electives to fulfill partially the requirements for a Texas Teacher's Certificate. Students should consult the "Undergraduate Certification Programs in Education" brochure for complete information. In addition to specific course requirements, teacher certification in Texas also requires passing scores on the Pre-Professional Skills Test (PPST), and, effective May 1, 1986, acceptable scores on the state-mandated exit competency test. Complete information on all requirements may be obtained at the Office of Teacher Certification and Placement at UTSA.

**COURSE DESCRIPTIONS
COMPUTER SCIENCE
(CS)**

1043 Computer Programming for Business Applications

(3-0) 3 hours credit. Prerequisite: MAT 1033.

An introduction to computers and programming in the business professions. Topics will be practical in nature and include solutions to equations, searching and sorting, inventory control, table look-up, and the vocabulary involved in working with computer professionals. May not be applied toward a major in the Division of Mathematics, Computer Science, and Statistics.

1073 Introductory Computer Programming for Scientific Applications

(3-0) 3 hours credit. Prerequisite: MAT 1063.

Introductory programming. Sorting and ranking; plotting; numerical taxonomy. Solution of non-linear equations; linear regression. Solution of linear systems. May not be applied toward a major in the Division of Mathematics, Computer Science, and Statistics.

1711 Introduction to Computer Science Laboratory

(0-2) 1 hour credit. Prerequisite or concurrent enrollment: MAT 1214. Concurrent enrollment: CS 1713.

Laboratory to accompany CS 1713.

1713 Introduction to Computer Science

(3-0) 3 hours credit. Prerequisite or concurrent enrollment: MAT 1214. Concurrent enrollment: CS 1711.

Introduction to basic concepts of computer science. Functional components of computers, data representation, problem solving methods, algorithm development, and programming using a high-level programming language.

1723 Data Structures I

(3-0) 3 hours credit. Prerequisites: CS 1711, CS 1713 and MAT 1214.

Abstract data structures (stacks, queues, lists, trees), primitive operations, and methods of data representation. Dynamic memory allocation, pointers, and recursion.

2033 Fundamentals of Computer Concepts

(3-0) 3 hours credit. Prerequisites: Sophomore or higher classification. Credit cannot be earned for both CS 1043 and CS 2033.

An introduction to computers and information processing for those with no previous background; a study of the computer, its uses and social impact; introduction to computer programming. May not be applied towards a major in the Division of Mathematics, Computer Science, and Statistics.

2073 Computer Programming With Engineering Applications

(3-0) 3 hours credit. Prerequisite: MAT 1214. Prerequisite or Corequisite: MAT 1223.

Algorithmic approaches to problem solving and computer program design for engineers. Engineering and mathematically-oriented problem sets will be emphasized, including

non-numeric applications. Searching, sorting, linked-lists, and data typing will be introduced. May not be applied towards a major in the Division of Mathematics, Computer Science, and Statistics.

2083 Microcomputer Programming For Teachers I

(3-0) 3 hours credit. Prerequisite: consent of instructor.

An introduction to the uses of microcomputers. Students will investigate instructional uses of the computer in the classroom and will write their own computer-generated instructional materials. Instruction will be in the BASIC programming language. May not be applied towards a major in the Division of Mathematics, Computer Science, and Statistics other than the Mathematics Education concentration.

2133 Microcomputer Programming for Teachers II

(3-0) 3 hours credit. Prerequisite: CS 2083.

Programming topics in Pascal with special emphasis on microcomputers in school and curriculum applications. May not be applied towards a major in the Division of Mathematics, Computer Science, and Statistics; however, may be applied to the Mathematics Education concentration.

2733 Introduction to Computer Organization

(3-0) 3 hours credit. Prerequisites: CS 1723 and concurrent enrollment in EE 2813 and EE 3813.

Introduction to computer organization with focus on the assembly language level, the conventional machine level, and the microprogramming level.

2743 Data Structures II

(3-0) 3 hours credit. Prerequisite: CS 1723.

Graphs, searching, sorting, storage device characteristics, file organizations, file access methods and memory management.

3073 Computer Graphics and Numerical Techniques.

(3-0) 3 hours credit. Prerequisites: CS 2073 and MAT 3253.

Computer graphics, numerical analysis, and advanced programming techniques with applications to engineering problems. May not be applied towards a major in the Division of Mathematics, Computer Science, and Statistics.

3133 Computers and Society

(3-0) 3 hours credit. Prerequisite: Any one of the following courses: CS 1043, 1073, 1713, 2033, 2073 or consent of instructor.

Examination of some of the major issues faced by the use of computers in society including computers and the law, computers in business, computers in education, computers in science and engineering, and electronic fund-transfer and communications.

3233 Discrete Mathematical Structures

(3-0) 3 hours credit. Prerequisites: CS 1723 and MAT 2233.

Survey and development of theoretical tools suitable for describing algorithmic applications. Propositional and predicate calculus, induction, proofs, set theory, and finite state automata.

3321 Topics in Programming Languages

(1-0) 1 hour credit. Prerequisite: CS 2743.

Problem solving techniques and constructs in a particular language. Languages will vary, but Ada, C, and Lisp are required for Computer Science majors. May be repeated for credit when topics vary, but not more than 3 hours will apply to the major.

3413 Data Communications

(3-0) 3 hours credit. Prerequisite: CS 2733 or consent of the instructor.

Concepts, principles and terminology concerning the standards, equipment, interfaces, protocols, architectures, transmission alternatives and regulatory issues involved in the design and use of data communications systems.

3723 Programming Languages

(3-0) 3 hours credit. Prerequisites: CS 2733, CS 2743, CS 3321: Lisp, and MAT 2213.

An introduction to the organization of high-level programming languages, including data types, control structures, data flow, and run-time environments. Use of formal syntax descriptions. The implications of interpretation versus compilation. Activation records and dynamic storage in block-structured languages.

3733 Operating Systems

(3-0) 3 hours credit. Prerequisites: CS 2733, CS 2743, CS 3321: C, and MAT 2213.

An introduction to the functions and major techniques of a modern multi-programming operating system. Includes exposure to the fundamentals of processor management, process synchronization, memory management, and peripheral management.

3743 Data Base Management

(3-0) 3 hours credit. Prerequisites: CS 2743 and MAT 2213.

Study of systems for management of large amounts of related data. Basic concepts, implementation approaches, user data models, commercially available systems.

3773 Programming Methodology

(3-0) 3 hours credit. Prerequisites: CS 2733, CS 2743, CS 3321: Ada, and MAT 2213.

Software development (analysis, specifications, design, implementation and testing). Design methodologies and programming standards. Development project in small groups, including acceptance test.

3793 Introduction to Artificial Intelligence

(3-0) 3 hours credit. Prerequisites: CS 2743, CS 3233, and CS 3321: Lisp.

Discussion of theorem proving by machine, computational linguistics, psychological modeling and computer games.

4103 Ethical and Social Issues in Computer Science

(3-0) 3 hours credit. Prerequisite: CS 3733 or consent of instructor.

An introduction to formal ethics and its application to issues arising from the modern computer revolution. Topics include ethical problems related to specialized areas of computer science, such as large data bases, networks, artificial intelligence, and computer security. Legal issues are also covered.

4313 Automata, Computability and Formal Languages

(3-0) 3 hours credit. Prerequisite: CS 3233.

Discussion of abstract machines (finite state automata, pushdown automata and Turing machines), formal grammars (regular, context-free and type 0) and the relationships among them.

4323 Analysis of Algorithms

(3-0) 3 hours credit. Prerequisites: CS 2743 and CS 3233.

Analysis of the performance of algorithms and discussion of programming techniques and data structures used in the writing of effective algorithms.

4383 Computer Graphics

(3-0) 3 hours credit. Prerequisites: CS 2743 and MAT 2233.

An introduction to two- and three-dimensional generative computer graphics. Display devices, data structures, mathematical transformations, and algorithms used in picture generation, manipulation, and display.

4633 Simulation

(3-0) 3 hours credit. Prerequisites: CS 1723 and STA 3513.

Construction and use of simulation models on a digital computer. Monte Carlo techniques and associated statistical methods.

4713 Compiler Writing

(3-0) 3 hours credit. Prerequisite: CS 3723.

An introduction to implementation of translators. Topics include formal grammars, scanners, parsing techniques, syntax-directed translation, symbol table management, code generation, and code optimization.

4753 Computer Architecture

(3-0) 3 hours credit. Prerequisites: EE 2513 and EE 2112. Prerequisite or concurrent enrollment: CS 3733.

An investigation of the major concepts of computer architecture including the central processing unit, main memory, and peripheral devices.

4803 Microprocessor Laboratory

(1-4) 3 hours credit. Prerequisites: EE 2513, EE 2112, and CS 2733.

Principles of large-scale integration and very large-scale integration. The organization and systems architecture of state-of-the-art microprocessors. The integration of micropro-

cessors with random-access memory, programmable read-only memory, peripheral controllers and I/O devices. Credit cannot be earned for both CS 4803 and SD 4803.

4853 Computer Interfaces

(3-0) 3 hours credit. Prerequisites: CS 2733 and EE 2813.

Basic characteristics and design considerations of printer, tape, and disk controllers, multiplexers and other devices for computer communications and teleprocessing. Credit cannot be earned for both CS 4853 and SD 4853.

4873 Computer Networks

(3-0) 3 hours credit. Prerequisites: EE 2813, CS 2733 and STA 3513.

Discussion of standard network layers including issues of topology, error detection and recovery, congestion control, and hardware interfacing. Credit cannot be earned for both CS 4873 and SD 4873.

4901 Seminar In Computer Sciences

(1-0) 1 hour credit. Prerequisite: Upper-division classification.

Scheduled and impromptu presentations on subjects of interest presented by division faculty and visiting lecturers. May be repeated for credit but no more than 3 hours will apply toward the major. (Formerly CSD 4901.)

4913 Independent Study

3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's Advisor, the Division Director, and Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work. May be repeated for credit, but not more than 6 hours will apply to the bachelor's degree. (Formerly CSD 4911-3.)

4953 Special Studies In Computer Science

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree. (Formerly CSD 4951-3.)

4993 Honors Research

(3-0) 3 hours credit. Prerequisite: Enrollment limited to candidates for College Honors during the last two semesters; approval by the College Honors Committee.

Supervised research and preparation of an honors thesis. May be repeated one time with approval. (Formerly CSD 4993.)

COURSE DESCRIPTIONS

MATHEMATICS

(MAT)

1013 Algebra

(3-0) 3 hours credit.

Real numbers, linear equations and inequalities, absolute inequalities, factorization of polynomials, rational expressions, negative and rational exponents, scientific notation, radicals, quadratic equations and inequalities, cartesian coordinates, relations, functions and graphing of functions.

1033 Algebra with Calculus for Business

(3-0) 3 hours credit. Prerequisite: MAT 1013 or the equivalent.

An introduction to business calculus with an emphasis on the algebra of functions. Concentration is on the algebraic manipulations of functions and includes volume and profit functions, both linear and quadratic; root finding and graphical analysis; differentiation and integration.

1063 Algebra for Scientists and Engineers

(3-0) 3 hours credit.

Algebraic expressions; equations, inequalities over the real numbers, relations, functions; polynomial and rational functions; systems of linear equations and inequalities; matrices

and determinants; complex numbers; polynomials, sequences, series, binomial expansion; mathematical induction; permutations, combinations.

1093 Precalculus

(3-0) 3 hours credit. Prerequisite: MAT 1063.

Exponential functions, logarithmic functions, trigonometric functions, complex numbers, De Moivre's Theorem, polar coordinates.

1143 Essential Elements in Mathematics

(3-0) 3 hours credit. Prerequisite: MAT 1013.

Numeration systems; properties of the systems of whole numbers, integers, rational numbers, and real numbers; problem solving, geometry and measurement; probability and statistics; logic. Applies only to elementary teacher certification requirements.

1153 Analytic Geometry

(3-0) 3 hours credit. Prerequisite: MAT 1093.

Vectors; equations of straight lines; equations of planes; conic sections; circles, ellipses, parabolas, hyperbolas; translation of axes, rotation of axes; polar coordinates; quadratic surfaces.

1214 Calculus I

(4-0) 4 hours credit. Prerequisite: MAT 1093 or MAT 1153.

An introduction to the concepts of limit, continuity and derivative, mean value theorem, and applications of derivatives such as velocity, acceleration, maximization and curve sketching; introduction to the Riemann integral and the fundamental theorem of calculus.

1223 Calculus II

(3-0) 3 hours credit. Prerequisite: MAT 1214.

Methods of integration, inverse trigonometric functions, applications of the integral, multiple integrals.

2213 Calculus III

(3-0) 3 hours credit. Prerequisite: MAT 1223.

Special areas of differential and integral calculus. Taylor series, power series, convergence tests, vectors, functions of several variables, partial derivatives.

2233 Linear Algebra

(3-0) 3 hours credit. Prerequisite: MAT 2213.

Vector spaces and matrix algebra, matrices and determinants, characteristic values of matrices and reduction to canonical forms. Emphasis on applications.

2243 Foundations of Mathematics

(3-0) 3 hours credit. Prerequisite: MAT 1214.

Development of theoretical tools for rigorous mathematics. Topics may include; mathematical logic, propositional and predicate calculus, set theory, functions and relations, cardinal and ordinal numbers, Boolean algebras, and construction of the natural numbers, integers and rational numbers. Emphasis on theorem proving.

3113 Algebra for Elementary Teachers

(3-0) 3 hours credit. Prerequisite: MAT 1143.

Areas of study from college algebra including linear and quadratic equations and inequalities, systems of equations, graphical methods. Open only to declared Elementary Education majors.

3123 Geometry for Elementary Teachers

(3-0) 3 hours credit. Prerequisite: MAT 1143.

A survey course encompassing topics from plane geometry, including an axiomatic development of proofs, coordinate geometry, non-euclidean geometry, 3-dimensional geometry and topology. Open only to declared Elementary Education majors.

3213 Foundations of Analysis

(3-0) 3 hours credit. Prerequisites: MAT 2213 and MAT 2243.

An opportunity for rigorous development of the foundations of real analysis; basic point set topology in \mathbb{R}^1 and \mathbb{R}^n , compactness; connectedness; convergence; cardinality. Emphasis on theorem proving and mathematical rigor.

3223 Complex Variables

(3-0) 3 hours credit. Prerequisite: MAT 2213.

An introduction to complex variables including elementary functions, line integrals, power series, residues and poles and conformal mappings.

3233 Modern Algebra

(3-0) 3 hours credit. Prerequisite: MAT 2213.

An introduction to the concepts of modern algebra by way of the integers. Emphasis on theorem proving and mathematical rigor.

3243 Calculus for Applications

(3-0) 3 hours credit. Prerequisite: MAT 2233.

Line vector differential and integral calculus, line integrals, Green's theorem, Stokes' theorem, Divergence theorem.

3253 Engineering Analysis I

(3-0) 3 hours credit. Prerequisite: MAT 2213.

Ordinary differential equations, Laplace transforms, linear algebra and matrix arithmetic. May not be applied to a major in the Division of Mathematics, Computer Science, and Statistics.

3263 Engineering Analysis II

(3-0) 3 hours credit. Prerequisite: MAT 3253.

Fourier series, partial differential equations and vector calculus. Topics from linear difference equations, Z-transforms and complex analysis. May not be applied to a major in the Division of Mathematics, Computer Science, and Statistics.

3613 Differential Equations I

(3-0) 3 hours credit. Prerequisite or concurrent enrollment in MAT 2233.

Basic notions of differential equations, solution of first order equations and linear equations with constant coefficients, n^{th} order initial value problems, power series solutions of differential equations.**3623 Differential Equations II**

(3-0) 3 hours credit. Prerequisite: MAT 3613.

Continuation of MAT 3613. Stability, partial differential equations and boundary value problems.

3633 Numerical Analysis

(3-0) 3 hours credit. Prerequisites: MAT 2233 and either CS 1073 or 1713.

Solution of linear and non-linear equations, curve-fitting, eigenvalue problems.

3923 Finance Mathematics

(3-0) 3 hours credit. Prerequisite: MAT 1214.

Analysis of the time value of money; preparation for parts of the actuarial examinations; determining the evaluation of flows of money, mortgage payments, bond amortization schedules, annuities, and related areas.

4113 Mathematical Subjects for Elementary Teachers

(3-0) 3 hours credit. Prerequisite: MAT 3113.

Selected mathematical subjects of an advanced nature relevant to the modern elementary mathematics curriculum. Open only to declared Elementary Education majors.

4123 History of Mathematics for Teachers

(3-0) 3 hours credit. Prerequisite: MAT 3113.

Selected subjects in mathematics developed through historical perspectives and biographies. Open only to preservice and inservice teachers.

4213 Real Analysis I

(3-0) 3 hours credit. Prerequisite: MAT 3213 recommended.

An in-depth study of the calculus of functions of a single real variable; pointwise convergence; continuity; uniform convergence; differentiation; functions of bounded variation; Riemann-Stieltjes integration; interchange of limits.

4223 Real Analysis II

(3-0) 3 hours credit. Prerequisites: MAT 2233 and 4213.

An in-depth study of the calculus of functions of several real variables; differentiation; Jacobians; non-linear transformations; integration.

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Statistics

4233 Modern Abstract Algebra I

(3-0) 3 hours credit. Prerequisites: MAT 2233 and MAT 2243.
An in-depth study of groups and rings.

4253 Number Theory

(3-0) 3 hours credit. Prerequisites: MAT 2213 and MAT 2243.
The theory of primes, congruences and related subjects.

4263 Geometry

(3-0) 3 hours credit. Prerequisites: MAT 2213 and MAT 2243.
Projective, affine and non-Euclidean geometry.

4273 Topology

(3-0) 3 hours credit. Prerequisites: MAT 2213 and MAT 2243.
Set theory including cardinal and ordinal numbers. Topological properties of the real line and metric spaces.

4913 Independent Study

3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's Advisor, and the Division Director and Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours will apply to the bachelor's degree.

4953 Special Studies in Mathematics

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4993 Honors Research

3 hours credit. Prerequisite: Enrollment limited to candidates for College Honors during the last two semesters; approval by the College Honors Committee.

Supervised research and preparation of an honors thesis. May be repeated one time only with approval.

COURSE DESCRIPTIONS
STATISTICS
(STA)

1053 Basic Statistics

(3-0) 3 hours credit. Prerequisite: MAT 1013, 1033 or 1063.

Descriptive statistics: histograms, measures of location and dispersion. Elementary probability theory. Random variables. Binomial and normal distributions. Interval estimation and hypothesis testing. Simple linear regression and correlation. Applications of the chi-square distribution.

1063 Basic Statistics for Business and Economics

(3-0) 3 hours credit. Prerequisite: MAT 1033.

Fundamental concepts and procedures of statistics and probability with business applications. Includes descriptive statistics, estimation, hypothesis testing, and simple linear regression and correlation.

1073 Statistics for Psychology

(3-0) 3 hours credit. Prerequisites: MAT 1013 and one PSY course.

The use of statistics in psychological research. Elementary probability theory. Descriptive statistics including histograms, graphing, and measures of central tendency and dispersion. Correlational techniques. Binomial and normal distributions. Inferential statistics including hypothesis testing, interval estimation, and analysis of variance.

- 1993 Statistical Methods for the Life and Social Sciences**
(3-0) 3 hours credit. Prerequisite: STA 1053 or 1063.
Point estimator properties, inference about the means and variances of two or more populations, categorical data analysis, linear regression, analysis of variance, nonparametric tests. Open to students of all disciplines.
- 3013 Multivariate Analysis for the Life and Social Sciences**
(3-0) 3 hours credit. Prerequisite: STA 1993 or 3523.
Linear algebra preliminaries, the multivariate normal distribution, tests on means, discrimination analysis, cluster analysis, principal components, factor analysis. Use of computer library programs. Open to students of all disciplines.
- 3313 Introduction to Sample Survey Theory and Methods**
(3-0) 3 hours credit. Prerequisite: STA 1993 or 3513.
Basic tools, simple random sampling, stratified random sampling, ratio and regression estimates, systematic sampling, cluster sampling, unequal probability sampling, two-stage and multistage sampling, non-sampling errors.
- 3433 Applied Non-Parametric Statistics**
(3-0) 3 hours credit. Prerequisite: STA 1993 or concurrent enrollment; STA 3523.
Tests of location. Goodness of fit tests. Rank tests. Tests based on nominal and ordinal data for both related and independent samples. Measures of association.
- 3513 Probability and Statistics**
(3-0) 3 hours credit. Prerequisite or concurrent enrollment: MAT 2213.
Axioms of probability, probability functions and density functions, random variables, functions of random variables and their sampling distributions. Important discrete and continuous random variables.
- 3523 Statistical Methods**
(3-0) 3 hours credit. Prerequisite: STA 3513.
Estimation and testing hypotheses, chi-square tests, linear regression, quality control, reliability, queueing theory, and nonparametric methods.
- 3533 Probability and Random Processes**
(3-0) 3 hours credit. Prerequisites: EE 3423 and MAT 3253.
Probability; random variables, distribution and density functions, limit theorems; random processes, correlation functions, power spectra; response of linear systems to random inputs.
- 3813 Discrete Data Analysis and Bioassay**
(3-0) 3 hours credit. Prerequisite: STA 1993 or 3523.
Methods especially useful for problems arising in the life sciences. Analysis of count data. Contingency tables. Probit analysis.
- 4613 Operations Research I**
(3-0) 3 hours credit. Prerequisite: MAT 2213 and MAT 2233.
Introduction to analytical methods and models of operations research, with emphasis on optimization. Linear, integer and non-linear programming. Network analysis, including PERT and CPM. Introduction to dynamic programming. Credit cannot be earned for both STA 4613 and SD 4613.
- 4623 Operations Research II**
(3-0) 3 hours credit. Prerequisite: STA 3513 or equivalent.
Introduction to probabilistic analysis and models in operations research. Decision analysis, Markov chains, queueing models. Credit cannot be earned for both STA 4623 and SD 4623.
- 4643 Introduction to Stochastic Processes**
(3-0) 3 hours credit. Prerequisite: STA 3513.
Finite Markov chains including transition probabilities, classification of states, limit theorems; queueing theory, birth and death processes.
- 4713 Applied Regression Analysis**
(3-0) 3 hours credit. Prerequisite: STA 1993 or 3513.
An introduction to regression analysis with emphasis on practical aspects, fitting a straight line, examination of residuals, matrix treatment of regression analysis, fitting and evaluation of general linear models, non-linear regression.

4723 Design and Analysis of Experiments

(3-0) 3 hours credit. Prerequisite: STA 1993; or concurrent enrollment: STA 3523.

General concepts in the design and analysis of experiments. Emphasis will be on the design of the experiment and tests of the validity of assumptions. Topics covered are completely randomized designs, randomized block designs, complete factorials, fractional factorials, and covariance analysis. The use of computer software packages will be stressed.

4803 Statistical Quality Control

(3-0) 3 hours credit. Prerequisite: STA 3513.

Statistics and simple probability are introduced in terms of problems which arise in manufacturing; their application to control of manufacturing processes. Acceptance sampling in terms of standard sampling plans: MIL-STD 105, MIL-STD 414, Dodge-Romig plans, continuous plans, etc.

4903 Survival Analysis

(3-0) 3 hours credit. Prerequisite: STA 3513 or equivalent.

Measures of reliability, hazard function, mean residual life function. Common failure distributions and a procedure for selecting an appropriate model. Reliability of complex series and parallel systems. Probabilistic approach to biomedical applications.

4953 Special Studies in Statistics

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

COLLEGE OF SOCIAL AND BEHAVIORAL SCIENCES

DIVISION OF BEHAVIORAL AND CULTURAL SCIENCES

The Division of Behavioral and Cultural Sciences offers Bachelor of Arts Degrees in American Studies (offered jointly with the Division of English, Classics, and Philosophy), Anthropology, History, and Psychology. American Studies is an interdisciplinary examination of the interrelationships among the diverse elements of American culture. Anthropology is the study of man's cultural behavior. History is the study of the past of human society. Psychology is the study of animal and human behavior and of cognitive processes and thought. Each major combines a specialization in one of these sciences with support work in a related area. The support work area involves a specific number of hours outside the major discipline which forms a cohesive whole and is approved by the student's advisor.

INTERNSHIP STUDY

Internship entails supervised experience within selected organizations in the San Antonio area. Placement is arranged with the Internship Coordinator of the College of Social and Behavioral Sciences. Supervision and grading of the internship experience is normally done by Division faculty members. The various degree plans within the Behavioral and Cultural Sciences place different restrictions on whether an internship must be taken on a credit-no credit basis and on whether an internship may be counted toward *major* requirements. Up to 6 semester hours may be counted toward *baccalaureate* requirements. Students from majors other than the social sciences are welcome to participate but should consult with their faculty advisors regarding the role of the internship within their own degree programs. Further information can be obtained from the Internship Coordinator.

DIVISIONAL HONORS

The Division of Behavioral and Cultural Sciences designates certain of its outstanding students as Honors students and provides the opportunity for advanced study under close faculty supervision.

Selection of students for admission to the Division Honors Program is based on: 1) the student's academic performance, and 2) recommendation by the faculty of the student's major discipline. To be eligible for the program students must have a minimum grade-point average of 3.00 overall at UTSA and a minimum grade-point average of 3.50 in their major at UTSA. The minimum grade-point averages must be maintained for students to receive the approval of the Division Honors Committee and the discipline faculty. Students admitted to the Honors program are expected to enroll in the appropriate Honors Thesis course during the final two semesters in residence. The completed thesis must be approved by the supervising faculty sponsor and another Divisional faculty member. Students interested in this program should contact their faculty advisors for additional information.

BACHELOR OF ARTS DEGREE IN AMERICAN STUDIES

American Studies is an interdisciplinary program which examines society and culture in the United States. This approach provides a broad view of the nation's life by examining not only politics and economics but also customs, art, literature, and thought and

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by using materials and methodologies from several disciplines. The major in this field allows the students latitude of study to develop, in close consultation with the American Studies advisor, a course of study adapted to their own interests and postgraduate needs and is especially appropriate for students choosing careers in law, urban studies, the military, public relations, historic conservation, museum and archival management, and community organizations.

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 120.¹⁰

All candidates for the degree must complete:

- A. 36 semester hours in courses approved by the American Studies advisor, 21 of which must be at the upper-division level.
 1. 18 semester hours of required courses are:
 - a. AMS 2013 Basic Issues in American Culture
 - b. AMS 3013 Early American Culture
 - c. AMS 3023 Modern American Culture
 - d. 3 semester hours from
AMS 3033 Topics in Regional American Cultures
or
AMS 3043 Topics in Ethnic American Cultures
 - e. 6 semester hours of AMS 4823 Topics in American Culture
 2. 18 semester hours of support work are:
 - a. 12 semester hours of courses on American society and culture from at least two disciplines. Must have the approval of the American Studies Advisor and constitute a unified area of interest. 3 semester hours of AMS 4933-6 Internship in American Studies may be taken as partial fulfillment of this requirement.

Areas of interest may include: Urban Studies, Mexican-American Studies, Women's Studies, The American Legal System, Nineteenth Century America, Modern America, and Contemporary America. Other areas or courses may be chosen with the consent of the American Studies Advisor.
 - b. 6 semester hours in a second support area taken with the consent of the American Studies Advisor.
- B. 42 semester hours of electives.

COURSE DESCRIPTIONS AMERICAN STUDIES (AMS)

2013 Basic Issues in American Culture

(3-0) 3 hours credit.

Introduces the student to present-day American civilization through the interdisciplinary American Studies approach. Examines the concept of culture and such topics as politics, the media, art, architecture, music, literature, race relations, and education.

3013 Early American Culture

(3-0) 3 hours credit.

Examines the major influences which shaped American culture in the pre-industrial era. Topics may include the impact of colonialism, the enlightenment, the frontier and other factors upon the development of a distinctive society.

¹⁰Thirty-nine of the total semester hours required for the degree must be at the upper-division level.

3023 Modern American Culture

(3-0) 3 hours credit.

Examines major trends in American culture during and after the industrial revolution, with special attention to the consequences of urbanization, industrialization, and secularization upon American society.

3033 Topics in Regional American Cultures

(3-0) 3 hours credit.

A study of the culture(s) of a distinct region or regions within the United States. Emphasis will be given to works that analyze the region's culture, literature by authors from that particular area, history, and folk traditions. Topics may include Southern, Western, Mid-Western, or other identifiable regional cultures. May be repeated for credit when topics vary.

3043 Topics in Ethnic American Cultures

(3-0) 3 hours credit.

A study of the cultural expressions of a particular racial or ethnic group or groups in the United States. Topics may include Native American, Black, Hispanic, Jewish, or other cultural groups. May be repeated for credit when topics vary.

4823 Topics in American Culture

(3-0) 3 hours credit.

Topics vary and may include: American reform movements and political change, Mark Twain's America, politics and law of American education, the American novel, American counter-culture, political behavior and expression in America, and cultural currents in various periods of American history. Two or more topics may be taken concurrently. May be repeated for credit when topics vary.

4911-3 Independent Study

1-3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, and the Division Director and Dean of the College in which the course is offered prior to registration.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4933-6 Internship in American Studies

3 or 6 hours credit. Prerequisite: Consent of Internship Coordinator prior to registration. Supervised experience relevant to American Studies within selected community organizations. A maximum of 6 credit hours may be earned through Internship in American Studies. Must be taken on a credit-no credit basis.

BACHELOR OF ARTS DEGREE IN ANTHROPOLOGY

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 120.¹⁴

All candidates for the degree must complete:

- A. 30 semester hours in the *major*, 21 of which must be at the upper-division level.
 1. 9 semester hours of required courses are:
 - a. ANT 2023 Introduction to Cultural Anthropology and Linguistics
 - b. ANT 2033 Introduction to Physical Anthropology
 - c. ANT 2043 Introduction to Archaeology
 2. 9 upper division semester hours are required in cultural anthropology, physical anthropology, and archaeology, with at least 3 hours in each, chosen in consultation with the student's advisor.

¹⁴Thirty-nine of the total semester hours required for the degree must be at the upper-division level.

Students seeking certification should consult the Undergraduate Certification Programs in Education brochure for information.

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Anthropology

3. 12 additional upper division semester hours of Anthropology electives (excluding ANT 4911-3 Independent Study) chosen in consultation with the student's advisor. The following courses may be used to satisfy all or part of this requirement.
 - ENG 3343 Principles of English Linguistics
 - GRG 3213 Cultural Geography
 - HIS 3113 The American Indian
 - LNG 3813 Introduction to Linguistics
 - PHI 3033 Philosophy of Science
 - PSY 3053 Cross-Cultural Psychology
 - SSC 3103 Major Theories of the Social Sciences
 - STA 1053 Basic Statistics
- B. 6 semester hours of courses in the social sciences outside the major chosen with the consent of the advisor.
- C. 9 upper-division semester hours of work from another discipline which supports the study of anthropology. The Support Area must form a cohesive program of study and must be chosen in consultation with the student's advisor after the completion of 12 semester hours of Anthropology. A statement of intent and the list of courses to be taken in the Support Area must be filed with the Undergraduate Advisor of Record.
- D. 33 semester hours of electives.

COURSE DESCRIPTIONS
ANTHROPOLOGY
(ANT)

1013 Man in Adaptation

(3-0) 3 hours credit.

The study of man's culture, past and present; its origin, development, and contemporary change; and the explorations of man's physical and cultural differences, using the paradigm of adaptation.

2023 Introduction to Cultural Anthropology and Linguistics

(3-0) 3 hours credit.

A problem-solving approach to classic and contemporary questions in cultural anthropology and linguistics. Stress is on the nature of anthropological inquiry as reflected in these two fields.

2033 Introduction to Physical Anthropology

(3-0) 3 hours credit.

Examines basic issues, concepts, and orientations of physical anthropology regarding human development and variation - both past and present - as well as the relationship between human biology and culture. (Credit cannot be earned for both ANT 2013 and ANT 2033.)

2043 Introduction to Archaeology

(3-0) 3 hours credit.

A problem-solving approach to classic and contemporary questions in archaeology. The nature of anthropological inquiry as reflected in the field is stressed. (Credit cannot be earned for both ANT 2013 and ANT 2043.)

3103 Social Organization

(3-0) 3 hours credit. Prerequisite: ANT 1013 or 2023 recommended.

Comparative analysis of family and social organization, primarily among non-literate peoples.

3133 Ritual and Symbol

(3-0) 3 hours credit. Prerequisite: ANT 1013 or 2023 recommended.

An examination of rituals, highly stereotyped, stylized, and repetitive acts, usually taking place in carefully selected locations and marked by use of material items. Students will be offered an introduction to Symbolic Anthropology through the study of ritual and its material culture.

3153 Indians of the Great Plains

(3-0) 3 hours credit. Prerequisite: ANT 1013 or 2023 recommended.

An examination of the fundamental cultural transformation and florescence of Native American societies of the Great Plains following the introduction of the horse. Attention is given also to the subsequent retrenchment under the imposition of Anglo-American dominance, and the recent emergence of new forms of cultural expression within tribal and urban areas.

3173 Ethnomedicine: Theory and Applications

(3-0) 3 hours credit. Prerequisite: ANT 1013 or 2023 recommended.

Integration of socio-cultural and medical approaches to health maintenance based on cross-cultural and contemporary urban research. Evidence for the efficacy of non-Western medical practices, the interaction of medical systems in bi-ethnic social situations, cross-cultural studies of mental health and the analysis of cross-ethnic programs of medical care receive attention.

3223 Cultural Ecology

(3-0) 3 hours credit. Prerequisite: ANT 1013 or 2023 recommended.

Man's adaptation to environment and his interaction with it, comparing simple and complex societies in various environmental contexts.

3253 The Archaeology of South America

(3-0) 3 hours credit. Prerequisite: ANT 1013 or 2043 recommended.

The origins and development of the native cultures of South America, and their relationships to the cultural areas of Central America and the Caribbean. Emphasis on the variety of cultural forms and cultural evolution. The roles of demography, subsistence systems, militarism, religion and other factors in the rise of South American cultures will be discussed.

3263 Archaeology of North America

(3-0) 3 hours credit. Prerequisite: ANT 1013 or 2043 recommended.

Survey of prehistoric cultures in North America from earliest times to historic contact; chronology; settlement and subsistence patterns; technology.

3273 Ancient Civilizations of Mesoamerica

(3-0) 3 hours credit. Prerequisite: ANT 1013 or 2043 recommended.

Examination of the development of the ancient civilizations of Guatemala, Mexico and Central America: Olmec, Teotihuacan, Maya, Toltec, Aztec, Zapotec, et al.

3293 Research Methods in Anthropology

(3-0) 3 hours credit. Prerequisite: ANT 1013 and completion of mathematics component of General Education Requirements.

Quantitative analysis and computer applications as used in anthropological research.

3313 Indians of the Woodlands

(3-0) 3 hours of credit. Prerequisite: ANT 1013 or 2023 recommended.

A survey of the cultures of the Native American peoples in eastern North America. Traditional cultures and changes due to European contact are examined using ethnographic, archaeological, and ethnohistorical data.

3333 Physical Anthropology of Human Populations

(3-0) 3 hours credit. Prerequisite: ANT 1013 or 2033 recommended.

Examines the biological variability of living populations. Includes genetics, anatomy, demography, and change within a physical anthropology framework.

3363 Traditional Mesoamerican Cultures

(3-0) 3 hours credit. Prerequisite: ANT 1013 or 2023 recommended.

A survey of the development, content and variety of Mesoamerican Indian cultures from before the Spanish conquest to the present. Emphasis is placed on the cultural responses of the Indian peoples to the pressures of the Spanish and National regimes.

3373 Artifacts, Crafts, and Artists of Native North America

(3-0) 3 hours credit. Prerequisite: ANT 1013 or 2033 recommended.

A survey of the techniques employed by Native North Americans for the production of aesthetic objects and the embellishment of utilitarian items. The course focuses on the explosion of creative activity which resulted from European contact and the eventual recognition of artists in more recent times.

3406 Field Course in Archaeology

6 hours credit. Prerequisites: Upper-division standing, consent of instructor, and at least one previous anthropology or archaeology course.

Offers the opportunity to gain intensive training in archaeological field methods: excavation, site survey, mapping, sampling, interpretation. Additional fees are required. May be repeated for credit with advisor's permission, but not more than 6 hours may be applied to the major.

3503 Human Origins

(3-0) 3 hours credit. Prerequisite: ANT 1013 or 2033 recommended.

The fossil record of human emergence, comparative studies of human evolution. Evolution of social organization, technology, and language development to the end of the Ice Age.

3513 The Human Skeleton

(3-0) 3 hours credit. Prerequisite: ANT 1013 or 2033 recommended.

Students are given the opportunity to develop skills in the study and analysis of human osteological remains. Applications of skeletal analysis in a variety of fields are considered including physical anthropology and archaeological demography.

3533 Environmental Archaeology

(3-0) 3 hours credit. Prerequisite: ANT 1013 or 2043 recommended.

A study of the environmental context of archaeological sites and the theories which facilitate the interpretation of artifact distribution and site location.

3603 Sex, Gender, and Culture

(3-0) 3 hours credit. Prerequisite: ANT 1013 or 2033 recommended.

Examination of the biological and cultural sources of differences between men and women.

3623 Primate Behavior

(3-2) 3 hours credit. Prerequisite: ANT 1013 or 2033 recommended.

Analysis of learning, development, social and abnormal behavior among the various primate species. Observational projects at the San Antonio Zoo are part of this course.

3643 Archaeometry

(3-0) 3 hours credit. Prerequisite: ANT 1013 or 2043 recommended.

Application of the physical and chemical sciences to archaeological problems; examination of selected topics: trade, technology, dating, settlement patterns, seasonality of occupations.

3653 Primitive Technology

(3-0) 3 hours credit. Prerequisite: ANT 1013, 2013, or 2023 recommended.

Lectures and demonstrations illustrating the technology of ancient and contemporary pre-industrial peoples: tool manufacture and use; making artifacts of wood, stone, and metals; social and economic aspects of primitive technologies; craft specialization; subsistence and settlement technology.

3663 Hunters and Gatherers

(3-0) 3 hours credit. Prerequisite: ANT 1013, 2013, or 2023 recommended.

A study of the lifeways of hunting and gathering peoples around the world. Emphasis is placed on prehistoric hunters and gatherers, leading to an examination of archaeological data, and problems in interpretation. Contemporary hunting and gathering populations are also studied.

3673 Ancient Civilizations of the Near East, Egypt, and Europe

(3-0) 3 hours credit. Prerequisite: ANT 1013 or 2043 recommended.

Development of agriculture and village life; beginnings of civilization in the Near East and Mediterranean; comparisons with Mesoamerica, India, and China; rise of civilization in the Nile Valley.

4113 Archaeology of Texas

(3-0) 3 hours credit. Prerequisite: ANT 3263.

Detailed review of prehistoric and historic aboriginal cultures of Texas and adjacent areas; current trends in Texas archaeology; examination of artifacts and field trips to local prehistoric sites.

4253 Cultural Dynamics

(3-0) 3 hours credit. Prerequisite: ANT 1013 or 2023 recommended.

An examination of anthropological thought on the causes, nature, and consequences of cultural change and continuity. Case studies are used to illustrate both long-term civilization processes in cultural transformation and shorter-range innovation and change.

4403 Laboratory Analysis in Anthropology

(2-4) 3 hours credit. Prerequisites: ANT 3403 or ANT 3406 and completion of science component of General Education Requirements.

Supervised analysis of field data; methods of analysis; research techniques; preparation of reports. May be repeated for an additional three hours of credit with consent of instructor.

4911-3 Independent Study

1-3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, and the Division Director and Dean of the College in which the course is offered prior to registration.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4933-6 Internship in Anthropology

3 or 6 hours credit. Prerequisite: consent of internship coordinator prior to registration. Supervised experience relevant to anthropology within selected community organizations. A maximum of 6 credit hours may be earned through Internship in Anthropology.

4951-3 Special Studies in Anthropology

1-3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4993 Honors Thesis

3 hours credit. Prerequisite: Enrollment limited to candidates for honors in anthropology during their last two semesters; completion of honors examination and approval by the Honors Program coordinator.

Supervised research and preparation of an honors thesis. May be repeated once with advisor's approval.

BACHELOR OF ARTS DEGREE IN HISTORY

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 120.¹⁵

All candidates for the degree must complete:

- A. 30 semester hours in the *major*,¹⁶ 18 of which must be at the upper-division level.

¹⁵Thirty-nine of the total semester hours required for the degree must be at the upper-division level.

¹⁶Courses taken to satisfy General Education Requirements may not be used to satisfy History major or support work requirements.

Students seeking teacher certification should consult the Undergraduate Certification Programs in Education brochure for information.

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History

1. 9 semester hours from courses numbered HIS 2103-2693 covering at least two different continental areas.
 2. 18 additional semester hours of history courses from at least two continental areas¹⁶, at least 15 of which must be at the upper-division level. Up to 6 semester hours *may* be applied to the major from:
 - AMS 3013 Early American Culture
 - AMS 3023 Modern American Culture
 - ANT 3273 Ancient Civilizations of Mesoamerica
 - ANT 3673 Ancient Civilizations of the Near East, Egypt, and Europe
 - ECO 3163 Development of Economic Thought
 - ECO 3183 Economic Development of the United States
 - POL 3133 Political Philosophy: Ancient and Medieval
 - POL 3143 Political Philosophy: Modern
 - POL 3323 Constitutional Law
 - PSY 4003 History of Psychology
 - SSC 3533 Inter-American Relations
 3. HIS 4973 Seminar in History
- B. 9 semester hours at the upper-division level in approved support work outside History in Social and Behavioral Sciences, Research Methodology, or Cultural Studies¹⁶.
- The student must consult with his/her advisor in order to define a coherent Support area. The Advisor's approval is required.
- C. 39 semester hours of electives

COURSE DESCRIPTIONS
HISTORY
(HIS)

1043 United States History, 1607-1870

(3-0) 3 hours credit.

American history from colonization through the Civil war period, with emphasis on geographical, political, economic, social, and cultural changes which influenced American society. Applies to the legislative requirement for United States history. (Credit may not be earned for both HIS 1013 and HIS 1043.)

1053 United States History, 1870 to the Present

(3-0) 3 hours credit.

American history from Reconstruction to the present, with emphasis on the geographical, political, economic, social, and cultural changes which influenced American society. Applies to the legislative requirements for United States history. (Credit may not be earned for both HIS 1033 and HIS 1053.)

2053 Survey of Texas History

(3-0) 3 hours credit.

A consideration of the regional history of the Southwest, with particular attention to the history of Texas. Topics include the impact of the Spanish and Mexican eras on subsequent developments, Independence, the annexation of the Southwest by the United States, and the political and economic development of the region in the late nineteenth and twentieth centuries. Applies to the legislative requirement for Texas history.

2103 Introduction to World Civilization I

(3-0) 3 hours credit. Prerequisite: Enrollment limited to candidates in The University Honors Program.

¹⁶Courses taken to satisfy General Education Requirements may not be used to satisfy History major or support work requirements.

An interdisciplinary examination of the origins, growth and development of representative major world cultures and civilizations, with emphasis on the political, social, economic, intellectual, and artistic legacies of each.

2113 Introduction to World Civilization II

(3-0) 3 hours credit. Prerequisite: Enrollment limited to candidates in The University Honors Program.

Further interdisciplinary analysis of the origins, growth and development of representative major world cultures and civilizations, with emphasis on the political, social, economic, intellectual, and artistic legacies of each.

2533 Latin America Since 1492

(3-0) 3 hours credit.

An introduction to Latin American civilization through history and literature. The major themes of Latin American history, as well as the contours of life in Latin America today, will be addressed. (Formerly HIS 2543; credit cannot be earned for both 2533 and 2543.)

2553 The Far East: History and Civilization

(3-0) 3 hours credit.

A survey of Far Eastern history and culture, with emphasis on China and Japan.

2573 Survey of African History

(3-0) 3 hours credit.

An introduction to African cultures emphasizing the impact of colonialism and independence.

2603 Western Civilization to 1648

(3-0) 3 hours credit.

A survey of the social, cultural, political, and economic development of Europe from its beginnings to upheavals of the seventeenth century. (Formerly HIS 2503. Credit cannot be earned for both 2503 and 2603.)

2613 Western Civilization Since 1648

(3-0) 3 hours credit.

A survey of the development of modern Europe with an emphasis on social, political, and economic transformation and the growth of new ways of understanding relationships of people to each other and to the natural world. Some attention will also be given to relationships between Europe and the Americas. (Formerly HIS 2513. Credit cannot be earned for both 2513 and 2613.)

3003 Colonial America and the Formation of American Society

(3-0) 3 hours credit.

An examination of the development and transformation of colonial societies in the seventeenth and eighteenth centuries, with special emphasis on family and community studies as a measure of social change. Applies to the legislative requirement for United States history.

3023 American Independence and National Unity, 1760-1820

(3-0) 3 hours credit. Prerequisite: HIS 1043 or equivalent or consent of instructor.

Origins of the American Revolution, the Revolutionary War, the struggle for unity, and the early years of nationhood. Applies to the legislative requirement for United States history.

3033 American Reform

(3-0) 3 hours credit.

An analysis and comparison of the origins and development of American reform from 1730 to the New Deal. Topics may include the Great Awakening, anti-slavery, temperance, abolitionism, Populism, Progressivism, and the New Deal. Applies to the legislative requirement for United States history.

3063 The Spanish Borderlands 1521-1821

(3-0) 3 hours credit.

Spanish exploration and colonization of the northern frontiers of New Spain. The introduction of Hispanic institutions and the development of a frontier society.

3073 The Mexican Borderlands/The American Southwest

(3-0) 3 hours credit.

The American Westward Movement into the Southwest, the settlement and development of the area as well as its political history are considered in relation to national trends.

Attention is given to the area as a meeting place of various European, American and Asian ethnic and racial groups and to their cultural institutions and expressions as reflections of the development of the area within United States history.

3083 History of the American West

(3-0) 3 hours credit.

An examination of the American Westward Movement in the 19th and 20th centuries. Topics may include the conquest and settlement of the territory, the relationship of the new territory to the nation, patterns of economic development, community-building, population diversity, and the symbol of the frontier.

3093 United States Constitutional History

(3-0) 3 hours credit.

Constitutional developments from the formation of the state and federal constitutions to Watergate. Particular attention is paid to the context of judicial decision-making at the Supreme Court level and the impact of those decisions on American life. Complements POL 3323, Constitutional Law. Applies to the legislative requirement for United States history.

3113 The American Indian

(3-0) 3 hours credit.

A history of the American Indian since European contact to the present. Attention is given to the internal cultural, economic and political developments within the different Indian groups as well as to the European and American developments and policies affecting the Indian.

3123 History of Texas: The Colonial and Mexican Periods and the War of Independence

(3-0) 3 hours credit.

Texas history from the seventeenth century through the War of Independence of 1836, emphasizing the Spanish and Mexican backgrounds of Texas and the changes which preceded Texas' independence. Applies to the legislative requirement in Texas history.

3153 The City in the Making of America

(3-0) 3 hours credit.

A study of urban growth since 1625. The course examines the social, economic, and political life of three phases in United States urbanization: the colonial city, the industrial city, and the modern metropolis. The effects of urban changes on the lives of city dwellers and on the ways in which cities have influenced national development.

3163 The Stranger in America

(3-0) 3 hours credit.

An examination of immigrants and their reception in American society from the eighteenth century to the present, including the immigrants' motives for moving to the United States, the problems they encountered in adjusting to their new surroundings, and the contributions they made to the nation's development.

3173 Modern America

(3-0) 3 hours credit.

Modern America since the onset of the Great Depression is examined in relation to the socio-economic forces and the political trends of the twentieth century. Topics include social change, evolving political functions and structures, and the new American role in the world order. Applies to the legislative requirement for United States history.

3183 Law and American Development

(3-0) 3 hours credit.

The impact of law from colonial times to the present. Particular attention will be paid to the impact of law on social change, economic growth, and political development. Applies to the legislative requirement for United States history.

3193 The South in American History

(3-0) 3 hours credit.

Development of Southern identity, slavery, Civil War and Reconstruction, Jim Crowism, the Black experience, and the Civil Rights Movement, with emphasis on the period since 1815.

3203 Britain Since 1760

(3-0) 3 hours credit.

A survey of modern British history, emphasizing political, social and intellectual factors in Britain's past.

3213 France Since 1750

(3-0) 3 hours credit.

Introduction to the culture, politics and life of France. Intensive examination of a central event in European history, the French Revolution, and its role in the formation of modern France.

3233 Germany Since 1806

(3-0) 3 hours credit.

The history of Germany since the Battle of Jena, emphasizing the crisis of the Prussian state, the effects of industrialization, the rise of German culture, Germany's unification and attainment of world power, and Germany's history since World War I.

3263 Seventeenth and Eighteenth Century Europe

(3-0) 3 hours credit.

A survey of European history under the *Ancien Regime*, to 1789. Examination of the development of and the limits to Absolutism, the "crisis" of the seventeenth century and the Baroque, the rise of science, and the culture of the Enlightenment.

3273 Medieval Europe

(3-0) 3 hours credit.

A study of European society from the fall of the Roman empire to the eve of the Renaissance. Attention to the growth of Christianity in Europe, changing forms of political, economic and social organization, and intellectual and cultural developments.

3283 Twentieth Century Europe

(3-0) 3 hours credit.

Economic, social, political, and cultural change in Europe since the First World War. Topics will include the formation of new political movements (such as social democracy, communism, fascism) between the wars, World War II and its effects, the post-war transformation of Europe, and the Cold War in Europe.

3293 Imperial Spain

(3-0) 3 hours credit.

Iberian history from the evolution of the northern kingdoms to the early 19th century. Topics may include the growth and development of Castile and Aragon, Hapsburg imperialism, the Bourbon reformers, and the collapse of the monarchy and the rise of the Carlist movement. (Formerly HIS 3243; credit cannot be earned for both 3243 and 3293.)

3303 History of Mexico

(3-0) 3 hours credit.

An overview of Mexican history from the pre-Columbian indigenous civilizations to the present. The course will cover the peopling of Mexico, the conquest, the formation of colonial society, Independence, the Mexican-American War, the liberal reforms, the Porfiriato, and the Mexican Revolution.

3343 Modern Central America and the Caribbean

(3-0) 3 hours credit.

The course will emphasize the nineteenth and twentieth centuries and may include the following topics: the breakdown of colonialism; the problems of independence; the rise and decline of slavery; the impact of foreign capital and imperialism; and the importance of nationalism, socialism, fascism, communism, and revolution in the contemporary era.

3353 Latin America Since Independence

(3-0) 3 hours credit.

The course will emphasize the nineteenth and twentieth centuries and may include the following topics: the breakdown of colonialism; the problems of independence; neocolonial development; the impact of the Depression; industrialization and urbanization; and the importance of nationalism, socialism, fascism, communism, and revolution in the contemporary era.

- 3363 Modern Brazil**
(3-0) 3 hours credit.
This course examines the recent history of Brazil by focusing on topics such as the Brazilian military, the Amazonian frontier, the fate of the Brazilian Indians, and race relations. Special attention will be given to Brazilian culture, literature, and music.
- 3373 Revolution in Latin America**
(3-0) 3 hours credit.
Survey of revolutions in Latin America. An analysis of the role which colonial legacies played in nineteenth and twentieth century social and political violence. Case studies may include Mexico, Bolivia, Cuba, Chile, and Nicaragua.
- 3403 Pre-Hispanic and Colonial Latin America**
(3-0) 3 hours credit.
An analysis of the pre-Columbian Indian civilizations, the Spanish conquest, and the Spanish and Portuguese colonial societies of the new world.
- 3423 The Republic Transformed, 1820-1877**
(3-0) 3 hours credit.
A study of the political, economic, and social and cultural developments in the United States from the age of Andrew Jackson through Reconstruction. Applies to the legislative requirement for United States history.
- 3433 The Emergence of Modern America, 1877-1929**
(3-0) 3 hours credit.
An examination of social and political responses to the industrial revolution in the United States. Applies to the legislative requirement for United States history.
- 3443 Hispanics in the United States**
(3-0) 3 hours credit.
A study of Mexican Americans, Puerto Ricans, Cubans, and other Hispanics in the United States. Special attention will be given to ethnic institutions and traditions as well as to inter-ethnic relations and theories of assimilation and acculturation. Applies to the legislative requirement for United States history.
- 3463 History of Religion in the United States**
(3-0) 3 hours credit.
Religious behavior, ideas, and institutions in American society from colonial times to the present, with special emphasis on periods of religious change, including the First and Second Great Awakening, the Social Gospel, and the New Religious Consciousness. (Formerly HIS 4133; credit cannot be earned for both 3463 and 4133.)
- 3473 History of Women in the United States**
(3-0) 3 hours credit.
Analysis of women's lives in American history, including how women have been affected by the economic, social, cultural, and political structures in different periods; how this experience has been altered by class, race and ethnicity, region, and age; and how women have coped with and promoted change throughout American history. Applies to the legislative requirement for United States history. (Credit cannot be earned for both HIS 3473 and SSC 3143.)
- 3483 The Culture of Capitalism in the United States**
(3-0) 3 hours credit.
Describes the impact of industrialization on its participants in the United States from 1820 to the present. Topics may include the formation of classes, comparative cultures and institutions of the managers and the managed, the changing nature of work and employment, and the relationship of ethnicity and gender to work.
- 3493 History of San Antonio**
(3-0) 3 hours credit.
An examination of San Antonio's history. Topics may include the cultural origins of colonial San Antonio; political, economic, and social development; and the effects of urbanization on local ethnic communities.
- 3503 The Expansion of Europe, 1415-1800**
(3-0) 3 hours credit.
A survey of European exploration, cultural and economic expansion, colonization, and imperialism.

3523 European Cultural History

(3-0) 3 hours credit.

Introduction to various aspects of the European cultural heritage, focusing on the interaction between society and culture. Topics may include popular culture, the arts, philosophy, science, social theory, ideology, and mass media.

3543 History of Modern Warfare

(3-0) 3 hours credit.

Survey of the major developments in the history of war since the Napoleonic era. Analyses of the social, economic, and political context in which wars have occurred. Emergence of new forms of weaponry, strategy, logistics, and tactics.

3633 Early Modern England, 1485-1760

(3-0) 3 hours credit.

English history in the Tudor, Stuart, and early Hanoverian eras, emphasizing the growth of the national state, the overseas expansion of England, and pre-industrial social and economic change.

3643 Modern Spain

(3-0) 3 hours credit.

A study of 19th and 20th century Spain, beginning with the origins of the Carlist movement, continuing with the rise and fall of the two Spanish Republics, the Civil War, the advent of the Franco regime, and concluding with the restoration of the monarchy.

3653 Modern Italy

(3-0) 3 hours credit.

A survey of Italian history from the eighteenth century to the present, in the wider context of modern European history.

3663 European International Relations Since 1789

(3-0) 3 hours credit.

European diplomacy and international relations since the French Revolution. Among the topics covered will be the Napoleonic Empire, the formation of the Concert of Europe, the Crimean War and the age of Bismarck, the diplomacy of imperialism, the origins of the two World Wars, and the Cold War.

3723 The European Renaissance

(3-0) 3 hours credit.

The cultural achievements of Italy and northern Europe from the 14th to the 16th centuries in their economic, social, and political contexts. (Formerly HIS 3513; credit cannot be earned for both 3513 and 3723.)

3733 Europe in the Age of the Reformation

(3-0) 3 hours credit.

Culture, religion, and society in Europe in the 16th century. (Formerly HIS 3513; credit cannot be earned for both 3513 and 3733.)

3743 Russia, 1682-1917

(3-0) 3 hours credit.

The development of Russia from the accession of Peter the Great to the outbreak of the Russian Revolution. (Formerly HIS 3223; credit cannot be earned for both 3223 and 3743.)

3753 Soviet Russia Since 1917

(3-0) 3 hours credit.

The evolution of Soviet Russia from the revolution of 1917 to the present. A critical analysis of the building of a socialist society in the Soviet Union and the relationship of Soviet Russia to the outside world. (Formerly HIS 3223; credit cannot be earned for both 3223 and 3753.)

3813 American Political History

(3-0) 3 hours credit.

A study of American political history from the 18th century to the present. Deals with presidents and major national developments, but also considers such topics as federalism, state politics, voting behavior, party systems, and political realignment. Applies to the legislative requirement for United States history.

3823 History of American Foreign Policy

(3-0) 3 hours credit.

An examination of the emergence of America as a world power and its subsequent activities in the affairs of nations. Particular emphasis is placed on the domestic roots of American diplomacy. Applies to the legislative requirement for United States history. (Credit cannot be earned for both HIS 2063 and HIS 3823.)

4003 History of Organized Crime

(3-0) 3 hours credit.

A study of the emergence and development of various types of syndicate crime and their impact on American society since the 19th century.

4113 American Intellectual History

(3-0) 3 hours credit. Prerequisite: Satisfaction of History General Education Requirements.

Examines ideas of intellectuals and scholars as well as ordinary people. Topics may include: definitions of America, individualism, community, consequences of the frontier, education and art in a democracy, industrialization, the culture of consumption, racial and ethnic conflicts, and women's roles in society.

4123 History of Science and Technology in America

(3-0) 3 hours credit.

History of American science and technology from the 18th century to the present, with particular attention to the effects of social change on scientific enterprise and the influence of science on American culture.

4911-3 Independent Study

1-3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, the Division Director, and the Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4933-6 Internship in History

3 or 6 hours credit. Prerequisite: Consent of Internship Coordinator prior to registration. Supervised experience relevant to history within selected community organizations. A maximum of 6 credit hours may be earned through Internship in History (must be taken on a credit-no credit basis.)

4951-3 Special Studies in History

1-3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4973 Seminar in History

(3-0) 3 hours credit. Prerequisite: Consent of instructor. Enrollment limited to juniors and seniors majoring in history.

The opportunity for an intensive study of a selected topic. Primary emphasis on supervised research on various aspects of the topic.

4993 Honors Thesis

3 hours credit. Prerequisite: Enrollment limited to candidates for honors in history during their last two semesters; completion of honors examination and approval of the Honors Program coordinator.

Supervised research and preparation of an honors thesis. May be repeated once with advisor's approval.

BACHELOR OF ARTS DEGREE IN PSYCHOLOGY

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 120.¹⁷

All candidates for the degree must complete:

- A. 33 semester hours in the *major*, 18 of which must be at the upper-division level.
 1. 15 semester hours of required lower-division courses are:
 - a. PSY 2013 Fundamentals of Psychology
 - b. 6 semester hours from:
 - PSY 2503 Developmental Psychology
 - PSY 2513 Abnormal Psychology
 - PSY 2523 Personality
 - PSY 2533 Social Psychology
 - c. 6 semester hours from:
 - PSY 2543 Theories of Learning
 - PSY 2553 Perception
 - PSY 2573 Psychology of Thought
 - PSY 2583 Psychology of Language
 2. 18 semester hours of required upper-division courses are:
 - a. PSY 3403 Experimental Psychology
PSY 3413 Experimental Psychology Laboratory
 - b. 3 semester hours from:
 - PSY 3103 Cognition
 - PSY 4113 Cognitive Development
 - PSY 4143 Memory
 - PSY 4153 Attention
 - PSY 4163 Sensory Processes
 - PSY 4213 Social Cognition
 - PSY 4273 Styles of Thought
 - c. 9 semester hours of upper-division courses in Psychology. No more than 3 hours of PSY 4911-3 Independent Study, PSY 4933-6 Internship in Psychology, or PSY 4993 Honors Thesis, may be counted toward this requirement.
- B. 12 hours of support work outside of Psychology. The courses taken to meet this requirement must have a common focus and must be approved by the student's advisor. A listing of the sets of courses which meet this requirement is available from the student's advisor.
- C. One of the following: STA 1073, STA 1053, STA 1063, or approved substitute. Must be completed before enrolling in PSY 3403 and PSY 3413 and should be completed during freshman or sophomore year. College Algebra prerequisite must be completed before enrolling.
- D. 30 semester hours of electives.

¹⁷Thirty-nine of the total semester hours required for the degree must be at the upper-division level.

COURSE DESCRIPTIONS

PSYCHOLOGY (PSY)

2013 Fundamentals of Psychology

(3-0) 3 hours credit.

Introduction to the study of the mind and behavior with attention to awareness, discrimination, sensation, perception, emotion, motivation, learning, memory, problem-solving, personality, mental and behavioral development, abnormal behavior, and behavior in group settings. Participation in illustrative research required.

2503 Developmental Psychology

(3-0) 3 hours credit. Prerequisite: PSY 2013 or consent of instructor.

Problems, methods and results in the study of the psychological development of the individual from the prenatal period to old age.

2513 Abnormal Psychology

(3-0) 3 hours credit. Prerequisite: PSY 2013 or consent of instructor.

Dynamics of abnormal behavior, with attention to description, causes, and treatment of major psychological disorders, including neuroses, psychoses, personality disorders, and psychosomatic disorders.

2523 Personality

(3-0) 3 hours credit. Prerequisite: PSY 2013 or consent of instructor.

Problems, methods, major theories, and results in the study of development and maintenance of typical modes of behavior and dynamics of adjustment.

2533 Social Psychology

(3-0) 3 hours credit. Prerequisite: SOC 1013 or PSY 2013 or consent of instructor.

Problems, methods, major theories, and results in the study of social interaction and interpersonal influence: self-identity, values and attitudes, role behavior, social perception and behavior within groups.

2543 Theories of Learning

(3-0) 3 hours credit. Prerequisite: PSY 2013 or consent of instructor; MAT 1013 or equivalent recommended.

An examination of major theories about the nature of the learning process. Discussion will focus on the construction and evaluation of learning models. The practical implications of theoretical findings for the acquisition, maintenance, and elimination of behavior will be considered.

2553 Perception

(3-0) 3 hours credit. Prerequisite: PSY 2013 or consent of instructor; MAT 1013 or equivalent recommended.

Survey of the processes by which the information available in light and sound is encoded and transformed to produce our perception of the world. Emphasis on the interaction between data-driven and conceptually-driven processes. Examination of elementary sensory physiology, illusions, pattern recognition, perceptual development, memory structures, and an introduction to information processing.

2573 Psychology of Thought

(3-0) 3 hours credit. Prerequisite: PSY 2013 or consent of instructor; MAT 1013 or equivalent recommended.

The processes of reasoning, concept formation, language, problem-solving, and creativity. Topics may include the role of logic in thinking, information processing models of problem-solving, and techniques influencing creativity.

2583 Psychology of Language

(3-0) 3 hours credit. Prerequisite: PSY 2013 or consent of instructor; MAT 1013 or equivalent recommended.

An introduction to the psychology of language. Contemporary research on the psychological aspects of language structure, comprehension, production, and development will be surveyed in order to illustrate the ways in which humans use verbal symbols to understand and describe events. Topics may include reading, brain-language relationships, and social determinants of thought and language.

- 3013 Psychological Measurement**
(3-0) 3 hours credit. Prerequisites: PSY 2013 and STA 1053 or 1064 or 1073 or consent of instructor.
The application of quantitative and qualitative measures to psychological data.
- 3023 Social Psychology of Small Groups**
(3-0) 3 hours credit. Prerequisite: PSY 2533 or consent of instructor.
Theory and modern research in the social psychology of small groups. Particular attention will be given to group formation, the nature of small group processes, and the influence of groups on behavior.
- 3053 Cross-Cultural Psychology**
(3-0) 3 hours credit. Prerequisites: PSY 2013 and ANT 1013 or consent of instructor.
Perception, learning, cognition and thinking, personality and social behavior from a cross-cultural perspective.
- 3063 Psychological Testing**
(3-0) 3 hours credit. Prerequisite: PSY 3003 or PSY 3403.
An introduction to the development, interpretation, and administration of psychological tests.
- 3103 Cognition**
(3-0) 3 hours credit. Prerequisites: One of the following: PSY 2543, 2553, 2573, or 2583.
Examination of current theories about how knowledge is represented in the mind. Emphasis will be placed on the processes by which stimuli are identified, by which past information is retrieved and utilized, and by which one's knowledge is modified.
- 3113 Motivation and Emotion**
(3-0) 3 hours credit. Prerequisite: PSY 2013 and junior standing.
Examination of cognitive, purposive, and biological factors in motivational explanations of human behavior. The nature of emotion and the role of emotion in explaining motivational processes.
- 3123 Attitudes**
(3-0) 3 hours credit. Prerequisite: PSY 2533 or consent of instructor.
Examination of current theory and research on the nature of attitudes, their acquisition, and processes of attitude change. Topics may include psychological foundations of attitudes, structure and function of attitudes, attitude measurement, attitude-behavior consistency, theories of attitude change, and the role of attitudes in social behavior.
- 3203 Industrial and Organizational Psychology**
(3-0) 3 hours credit. Prerequisite: Junior standing or consent of instructor.
The role of psychology in industry. Applications of psychological knowledge to industrial problems such as personnel selection, employee motivation and satisfaction, and the influence of organizations on behavior.
- 3303 Psychological Perspectives on Gender**
(3-0) 3 hours credit. Prerequisites: PSY 2503, 2523, or 2533.
Consideration of physiological and social-learning origins of sex differences and psychological theories of sex-stereotyped and sexual behavior. Topics may include androgyny vs. sex-typed behavior, gender dysfunction, origins of sex stereotypes, sexual preferences, and sex differences in reasoning ability, aggression, sexual behavior, personality, and psychopathology.
- 3403 Experimental Psychology**
(3-0) 3 hours credit. Prerequisites: PSY 2013; one course from PSY 2503, 2513, 2523, 2533; one course from PSY 2543, 2553, 2573, 2583; and STA 1073 or equivalent. Concurrent enrollment in PSY 3413.
This course is designed to offer students the opportunity to familiarize themselves with representative experimental designs employed in psychological research, to provide instruction in the choice of appropriate designs, to provide the opportunity to develop skills in the analysis of published research, and to offer an introduction to techniques for collecting and analyzing data. (Formerly PSY 3003; credit may not be earned for both PSY 3403 and PSY 3003.)

3413 Experimental Psychology Laboratory

(2-2) 3 hours credit. Prerequisite: Concurrent enrollment in PSY 3403.

Application of observational and experimental procedures to selected problems in the collection of psychological data and the evaluation of psychological theories. (Credit may not be earned for both PSY 3001 and PSY 3413.)

3513 Psychopathology and Childhood

(3-0) 3 hours credit. Prerequisite: PSY 2513 or consent of instructor.

Clinical findings and experimental research regarding childhood behavior problems, including hyperkinesis, infantile autism, childhood schizophrenia, and childhood neuroses. Additional topics include family influences on development of abnormal behavior and various psychotherapeutic techniques.

3523 Psychology of Aging

(3-0) 3 hours credit. Prerequisite: PSY 2503 or consent of instructor.

Descriptive and theoretical accounts of psychological aspects of aging.

3543 Introduction to Clinical Psychology

(3-0) 3 hours credit. Prerequisite: PSY 2513.

An introduction to the concepts, methods, and profession of clinical psychology. Topics will include historical background, theoretical and research perspectives on psychopathology and psychotherapy, clinical assessment, and professional issues concerning clinical training, regulation, and ethics. (Credit may not be earned for both PSY 3533 and PSY 3543.)

3633 Aggression

(3-0) 3 hours credit. Prerequisites: ANT 1013, or PSY 2013 or consent of instructor.

Survey of social and psychological data, findings and theory of aggression, both human and non-human.

3903 Advanced Psychological Research

(2-2) 3 hours credit. Prerequisite: PSY 3003 or PSY 3403.

Provides the opportunity for the student to conduct current research in a sub-area of psychology under the instructor's supervision. Lectures will include a review of previous research in the sub-area and discussion of research design, data collection, data analysis, and the reporting of research.

4003 History of Psychology

(3-0) 3 hours credit. Prerequisite: PSY 2013.

The development of major theoretical positions and research strategies in psychology from the ancient Greeks to the present with emphasis on the development of scientific psychology since the late nineteenth century.

4103 Prejudice

(3-0) 3 hours credit. Prerequisite: PSY 2533 or consent of instructor.

Consideration of social psychological and personality factors in prejudice and stereotyping, and their interaction with cultural factors in producing racism and other prejudices.

4113 Cognitive Development

(3-0) 3 hours credit. Prerequisite: PSY 2503 or 2573 or consent of instructor.

The development of perception, memory, and thinking in children, with attention to the roles of experience and maturation in development of thought, and to the validity of the concept of cognitive stages, particularly Piagetian models.

4133 Social and Personality Development

(3-0) 3 hours credit. Prerequisite: PSY 2503 or consent of instructor.

Social and personality development across the life-span. Topics may include sex-role development, child rearing, achievement, and the influence of peers. Socialization into different social roles may also be considered. Credit cannot be earned for both PSY 4133 and either PSY 3283 or PSY 4123.

4143 Memory

(3-0) 3 hours credit. Prerequisites: PSY 3003 or PSY 3403; and one of the following: PSY 2543, 2553, 2573, or 2583, or consent of instructor.

Models for the coding, storage, and retrieval of information in memory. Organization and structure of short-term memory, long-term memory, semantic memory and the role of verbalization and images in memory.

4163 Sensory Processes

(3-0) 3 hours credit. Prerequisite: PSY 2553 and PSY 3003 or consent of instructor. Study of sensory physiology and the four psychophysical questions: detection, discrimination, magnitude estimation, and recognition.

4183 Physiological Psychology

(3-0) 3 hours credit. Prerequisite: PSY 2013 or consent of instructor. The biological, particularly neurophysiological, bases of human behavior and cognition, the structure and organization of the nervous system, and the effect of the latter on perception, memory, learning, motivation and emotion. (Formerly PSY 2563. Credit cannot be earned for both 2563 and 4183.)

4193 Relationships

(3-0) 3 hours credit. Prerequisite: PSY 2533 and junior standing. A consideration of the psychological bases and development of social relationships varying from impersonal to intimate. Emphasis will be given to formal models of social interaction and dependency. Special attention will be given to the development of romantic relationships, marriage, and divorce. (Credit cannot be earned for PSY 4193 and PSY 4203.)

4213 Social Cognition

(3-0) 3 hours credit. Prerequisites: PSY 3003 or PSY 3403; and one of the following: PSY 2533, 2573, or consent of instructor. The study of how people perceive and construe social events, social situations, and the behavior of other people. Some emphasis is also placed on how social and cultural forces affect person perception processes.

4253 Psychology and Health

(3-0) 3 hours credit. Prerequisite: Junior standing. Exploration of the role of psychological factors in physical health. Topics may include the relationship between mind and body, psychological factors in pain, the effects of stress on health, psychological aspects of chronic illness, psychological processes involved in perceiving and responding to physical symptoms, interpersonal relationships in health care, personality factors in illness and issues concerning death and dying.

4263 Psychology and Law

(3-0) 3 hours credit. Consideration of the role of psychology in the legal system with emphasis on the contributions of psychology to the understanding of criminal behavior and the operation of the criminal justice system. Topics may include: eyewitness testimony, police behavior, jury selection, jury decision making, the insanity defense, plea bargaining and sentencing, punishment, and imprisonment.

4273 Styles of Thought

(3-0) 3 hours credit. Prerequisites: PSY 3003 or PSY 3403; and 3103. Study of how individuals vary in the way they perceive and analyze information. Topics may include the basis for skilled cognitive performances, the nature of cognitive pathologies, the impact of belief systems on cognitive performances, the consistency of individual differences in styles of thought across different cognitive tasks, and the modification of thought styles.

4283 Freudian Psychology

(3-0) 3 hours credit. Prerequisites: PSY 2523 and junior standing. Development of Freud's thought through a reading of his major works and a consideration of his life. The influence of Freud's theories on neo-Freudian theorists and on psychological theory and research.

4911-3 Independent Study

1-3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, the Division Director, and the Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree. No more than 3 credit hours of independent study will apply toward Psychology major requirements.

4923 Current Topics in Psychology

(3-0) 3 hours credit. Prerequisites: PSY 2013 and junior standing or consent of instructor. Coverage of topics of current interest in the field of psychology. Topics may vary. May be repeated once for credit when topics vary, but no more than 3 credit hours will apply toward major requirements.

4933-6 Internship In Psychology

3 or 6 hours credit. Prerequisite: Consent of Internship Coordinator prior to registration. Supervised experience relevant to psychology within selected community organizations. A maximum of 6 credit hours may be earned through Internship in Psychology. No more than 3 credit hours will apply toward Psychology major requirements. Must be taken on a credit-no credit basis.

4951-3 Special Studies in Psychology

1-3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4993 Honors Thesis

3 hours credit. Prerequisite: Enrollment limited to candidates for honors in psychology. Requirements for candidacy include the sponsorship of a faculty member and Psychology faculty approval of the student's project proposal.

Supervised research and preparation of an honors thesis. May be repeated once for credit with advisor's approval. No more than 3 credit hours can apply toward Psychology major requirements.

DIVISION OF BICULTURAL-BILINGUAL STUDIES

The Division of Bicultural-Bilingual Studies offers courses which may be used to fulfill the General Education Requirements (GER), or which may be taken as support courses for programs within The University or as electives. Courses in Bicultural-Bilingual Studies offer the opportunity for students to prepare for bilingual and/or second language teaching and give insights into bilingual and multicultural functions in society. Courses in English as a Second Language offer students the opportunity to learn appropriate methods and strategies for teaching at the elementary, secondary, and adult levels. Courses are designed for students who plan to teach second languages, but they also offer the opportunity for those who intend to teach in other areas or to enter fields that rely heavily on an understanding of language learning and bilingualism.¹⁷

COURSE DESCRIPTIONS BICULTURAL-BILINGUAL STUDIES (BBL)

- 3003 Multiculturalism in the Southwest**
(3-0) 3 hours credit.
Survey of patterns, ideals, and prospects of multiculturalism in the present and future of the Southwest. Examination of cultural differences and similarities among all peoples of the region, and the roles of multiculturalism in politics, education, economics, religion, and everyday life.
- 3013 Language Analysis and Bilingualism**
(3-0) 3 hours credit.
Survey of concepts in descriptive linguistics; analysis of language contact phenomena, including cross-linguistic transfer, language alternation, and bilingualism.
- 3023 Mexican-American Biculturalism**
(3-0) 3 hours credit.
A survey of the major cultural patterns and of cultural diversity among Mexican Americans, including family and kinship, language, health, folklore, art, music, religion, sex roles, and cultural revitalization.
- 3033 The Mexican American in the Southwest**
(3-0) 3 hours credit.
Historical foundations of U.S.-Mexico biculturalism in the area. Factors in the development of the area during the colonial era are studied as background for the contemporary bicultural Southwest. Mexican-American contributions to politics and economics of the area are considered.
- 3043 Psychological Considerations in a Bicultural Environment**
(3-0) 3 hours credit.
A cross-cultural and social psychological study of human development, interethnic communication, stereotyping, learning styles, and other topics relevant to delivery of social and educational services in a bicultural setting.
- 3133 Communicative Competence in a Multilingual Society**
(3-0) 3 hours credit.
A study of language in its social and cultural contexts, with emphasis on factors affecting language choice and attitudes in multilingual settings. Examination of strategies to promote first and second language acquisition in schools and communities.
- 4023 Foundations of Bicultural-Bilingual Education**
(3-0) 3 hours credit.
An investigation of the philosophies and theories of bicultural-bilingual education relating to the learning processes of children.

¹⁷Students seeking teacher certification should consult the Undergraduate Certification Programs in Education brochure for information.

232 / Bicultural-Bilingual Studies
English as a Second Language

- 4033 Assessing Language and Learning in Bicultural-Bilingual Classrooms**
(3-0) 3 hours credit.
A survey of evaluation and testing procedures for bicultural-bilingual classrooms, including formal and informal assessment of language proficiency for instructional purposes and the appropriate use of standardized tests.
- 4063 Teaching Content in a Bicultural-Bilingual Education program**
(3-0) 3 hours credit.
A thorough investigation of appropriate first language usage in bilingual classrooms focusing on the different content areas and the study of language distribution strategies. (Offered in Spanish)
- 4073 Language Arts in a Bicultural-Bilingual Program**
(3-0) 3 hours credit.
A study of books and multicultural materials from diverse sources, with emphasis on their integrated use in the teaching of content and related skills in the elementary bilingual classroom.
- 4911-3 Independent Study**
1-3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor and the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.
- 4951-3 Special Studies in Bilingual and Second Language Education**
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours within any one discipline will apply to a bachelor's degree.

COURSE DESCRIPTIONS
ENGLISH AS A SECOND LANGUAGE
(ESL)

- 3003 Applications of Linguistics**
(3-0) 3 hours credit.
A study of the applications of linguistics to the teaching of a second language in English as a Second Language and Bilingual Education programs. Particular attention given to psycholinguistic and sociolinguistic issues in second language acquisition, and to oral language development, reading and writing.
- 3033 Introduction to Teaching English as a Second/Foreign Language**
(3-0) 3 hours credit.
A study of the various approaches, methods, and techniques available for teaching language in English as a Second Language and Bilingual Education programs.
- 3043 Psycholinguistic Concepts in Second Language Acquisition**
(3-0) 3 hours credit.
A study of second language acquisition theory with emphasis on classroom-centered implications.
- 3053 Literacy in a Second Language**
(3-0) 3 hours credit.
A course on the relationship of reading and writing acquisition to second language development; the design and evaluation of appropriate materials for the teaching of literacy.

DIVISION OF EDUCATION

The Division of Education offers three degree programs: The Bachelor of Arts Degree in Early Childhood and Elementary Education, the Bachelor of Science Degree in Health Education, and the Bachelor of Science Degree in Physical Education. Students seeking degrees in these areas may pursue teacher certification, or may follow similar but individualized programs to prepare them for professional service in institutions and agencies concerned with the welfare of children and youth.

The Division of Education also provides the professional education courses for all students seeking secondary and/or all-level teacher certification. Students seeking secondary and/or all-level teaching certificates pursue a degree in an approved academic area and complete the appropriate certificate requirements outlined in the *Undergraduate Certification Programs in Education* brochure available through the Office of Teacher Certification and Placement.

DIVISIONAL HONORS

The Division of Education designates certain of its outstanding students as Honors students and provides the opportunity for advanced study under close faculty supervision.

Selection of students for admission to the Division Honors Program is based on: 1) the student's academic performance, and 2) recommendation by the faculty of the student's major discipline. To be eligible for the program students must have a minimum grade-point average of 3.00 overall at UTSA and a minimum grade-point average of 3.50 in their major at UTSA. The minimum grade-point averages must be maintained for students to receive the approval of the Division Honors Committee and the discipline faculty. Students admitted to the Honors program are expected to enroll in the appropriate Honors Thesis course during the final two semesters in residence. The completed thesis must be approved by the supervising faculty sponsor and another Divisional faculty member. Students interested in this program should contact their faculty advisors for additional information.

CERTIFICATE PROGRAMS

The University of Texas at San Antonio is approved by the Texas Education Agency to recommend students for teaching certificates in various baccalaureate degree areas. Requirements for all certificate programs offered through The University of Texas at San Antonio are listed in the *Undergraduate Certification Programs in Education* brochure available through the Office of Teacher Certification and Placement. Students seeking teacher certification should contact the Office of Teacher Certification and Placement and obtain a copy of this brochure at the earliest opportunity. Some academic requirements for the teaching certificate are in addition to those outlined for the degree.

Admission to Teacher Certificate Programs

All students seeking teacher certification must apply for formal admission to a certificate program through the Office of Teacher Certification and Placement. Applications for admission to a certificate program should be submitted when a student has completed at least three courses at The UTSA, and has attained junior standing (60 semester hours), an overall grade point average of 2.5 on all college work attempted, and passing scores on the Pre-Professional Skills Test (PPST). The PPST should be taken after completion of the general education requirements in English and mathematics, preferably during the second semester of the sophomore year. *No more than six semester hours of work in professional education (EDP 3003 and EDU 3003) may be*

Bachelor of Arts Degree in Early Childhood and Elementary Education

taken by a student until the Pre-Professional Skills Test (PPST) has been passed and the student has been formally admitted to the UTSA Teacher Certification Program. For more information on the Pre-Professional Skills Test (PPST), including current passing scores, contact the Office of Teacher Certification and Placement at The UTSA.

Education Professional Semester and Student Teaching

Admission to The Education Professional Semester and Student Teaching must be obtained during the semester prior to enrollment. Admission is contingent upon completion of the following requirements:

- A. Admission to The UTSA Teacher Certification Program, including submission of passing scores on the Pre-Professional Skill Test (PPST);
- B. A 2.5 overall GPA on all college work attempted;
- C. At least 90 semester credit hours; students should consult the Director of Student Teaching for specific credit requirements;
- D. Completion of C&I 3003 or ECE 4003, EDP 3003, EDU 3003 and 3013;
- E. For students seeking a Kindergarten or English as a Second Language Endorsement, at least 6 semester hours of approved coursework in the Endorsement area;
- F. The recommendations of three UTSA professors, at least two of whom must be from the Division of Education; one of the three recommendations must be obtained from the student's assigned faculty advisor;
- G. Presentation of a negative tuberculosis report from a licensed physician valid at the time of registration for the Professional Semester; and
- H. Approval of the Director of Student Teaching.

EXIT TESTING

Effective May 1, 1986, all individuals seeking a Teaching Certificate, an additional Teaching Field, or an Endorsement must achieve a satisfactory score on one or more portions of the ExCET Test prescribed by the State Board of Education. Content to be tested and the criteria for mastery has been prescribed for each area by the State Board of Education. The ExCET Test is taken during the individual's last semester of coursework; passing scores on the appropriate tests must be submitted before the individual can receive a Texas Teacher's Certificate. Objectives and sample questions for each ExCET Test are on file at the Reserve Desk at The UTSA Library. For further information, contact the Office of Teacher Certification and Placement at The UTSA.

Elementary Education Majors

Students preparing to become elementary teachers under the 1989-91 catalog are required to contact the Division of Education for degree requirements which will be in effect in the Fall of 1989. These degree requirements are contained in an addendum to this catalog.

**BACHELOR OF ARTS DEGREE IN EARLY CHILDHOOD AND
ELEMENTARY EDUCATION**

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 121, of which at least 57 must be at the upper-division level.

All candidates for the degree must complete:

A. 24 semester hours in one of the two groups of courses listed below:

1. Elementary Education¹⁸

a. Required courses to be taken early in the sequence:

- C&I 3703 Introduction to Developmental Reading
- C&I 3713 Introduction to Content Area Reading-Elementary
- ECE 3213 Language Arts in the Elementary School
- ECE 3223 Social Studies in the Elementary School

b. Additional courses in the sequence:

- ECE 3233 Mathematics in the Elementary School
- ECE 4003 Conceptual Approaches to Teaching in the Elementary School
- ECE 4133 The Expressive Modes of Children in the Elementary School
- ECE 4213 Science in the Elementary School

2. Early Childhood Education

- ECE 3103 Young Children's Literature and Storytelling
- ECE 3113 Play and Creative Activities in Early and Middle Childhood Education
- ECE 3123 Development and Learning in Early and Middle Childhood
- ECE 3133 Programs in Early and Middle Childhood Education
- ECE 3203 Tests and Measurements for Early and Middle Childhood
- ECE 4103 Guidance of Young Children in Groups
- ECE 4113 Language Development and Reading in Early and Middle Childhood Education
- ECE 4123 Parents and Community Resources in Early and Middle Childhood

B. 21 semester hours of course work in Professional Education;

- EDP 3003 Introduction to Educational Psychology
- EDU 3003 Educational Sociology
- EDU 3013 The School Environment and Learning Resources
- EDU 4013 Classroom Climate in the Elementary School
- EDU 4009 Student Teaching: Early Childhood-Elementary
or EDU 4019 Student Teaching: Elementary
or EDU 4029 Student Teaching: Elementary-Kindergarten
or EDU 4039 Student Teaching: Elementary-ESL

NOTE: ECE 4003, EDP 3003, EDU 3003, and 3013 must be taken prior to the Education Professional Semester and Student Teaching. EDU 4013 is taken concurrently with Student Teaching (EDU 4009, 4019, 4029, or 4039) to comprise the 12 semester hour Education Professional Semester and Student Teaching. Students not seeking teaching certification may, with the approval of the Undergraduate Advisor, substitute appropriate course work equivalent to the number of hours in the Professional Semester to earn a B.A. in Early Childhood and Elementary Education without certification.

C. 34 semester hours of electives, 12 of which must be at the upper-division level.

Students seeking a teaching certificate may use these electives to partially satisfy additional requirements for the certificate and should consult the Office of Teacher Certification and Placement for complete information on all certificate requirements.

¹⁸All courses in Elementary Education require formal admission to The UTSA Teacher Certification Program (including passing scores on the Pre-Professional Skills Test) as a prerequisite to enrollment. For additional prerequisites, see course descriptions.

BACHELOR OF SCIENCE DEGREE IN HEALTH EDUCATION

The minimum number of semester hours for this degree, including the 42 hours of General Education Requirements, is 124, of which at least 54 must be at the upper-division level.

All candidates for the degree must complete:

A. 24 semester hours in Health Education from the following:

- HPE 2503 The Foundations of Health Education
- HPE 2513 Personal and Family Health
- HPE 3513 The Elementary School Health Program
- HPE 3523 The Secondary School Health Program
- HPE 3533 Drug Education
- HPE 3543 Physical Growth and Development
- HPE 4513 Consumer Health
- HPE 4523 Teaching Sex Education
- HPE 4533 Nutrition Education
- HPE 4543 First Aid and Safety

B. 24 semester hours of course work in Professional Education:

- C&I 3003 The Secondary School Curriculum
- EDP 3003 Introduction to Educational Psychology
- EDU 3003 Educational Sociology
- EDU 3013 The School Environment and Learning Resources
- EDU 4093 Teaching in the Secondary School
- EDU 4049 Student Teaching: Secondary

or

- EDU 4059 Student Teaching: Secondary-ESL

NOTE: C&I 3003, EDP 3003, EDU 3003, and 3013 must be taken prior to the Education Professional Semester and Student Teaching. EDU 4093 is taken concurrently with Student Teaching (EDU 4049 or 4059) to comprise the 12 semester hour Education Professional Semester and Student Teaching. Students not seeking teacher certification may, with the approval of the Undergraduate Advisor, substitute appropriate coursework equivalent to the number of hours in the Professional Semester to earn a B.S. in Health Education without certification.

C. 34 semester hours of *electives*, 12 of which must be at the upper-division level.

These may be taken from any Division of The University and for students seeking certificates can be used to partially satisfy additional requirements for a teaching certificate. Students should consult the Office of Teacher Certification and Placement for complete information on all certificate requirements.

All students selecting a degree in Health Education must elect 4 semester hours of HPE Activity Courses (HPE 1001, 1101, 2001, 2101, 2331, 2401, 2411) including one course on physical fitness (HPE 1001: Physical Fitness, Aerobic Running, or Weight Training; or HPE 2331).

BACHELOR OF SCIENCE DEGREE IN PHYSICAL EDUCATION

The minimum number of semester hours for this degree, including the 42 hours of General Education Requirements, is 125, of which at least 54 must be at the upper-division level.

All candidates for the degree must complete:

A. 33 semester hours in Physical Education from the following:

- *AHS 3113 Kinesiology
- *HPE 2001 Skill Analysis in Physical Activity: Individual Activities
- *HPE 2101 Skill Analysis in Physical Activity: Team Sports
- *HPE 2303 The Foundations of Physical Education
- *HPE 2331 Physical and Motor Assessment
- *HPE 2401 Gymnastics
- *HPE 2411 Rhythmical Activities and Dance
- *HPE 2423 Intramurals and Recreation Programming
- HPE 2433 Lifetime Sports
- HPE 3303 Athletic Injuries and Training Procedures
- HPE 3413 The Elementary School Physical Education Program
- HPE 3423 The Secondary School Physical Education Program
- HPE 3443 Principles of Exercise and Physical Fitness
- HPE 4113 Evaluation in Physical Education
- HPE 4343 Movement Education
- HPE 4403 Motor Learning and Skill Performance
- HPE 4413 Coaching Interscholastic Athletics
- HPE 4423 Adaptive Physical Education
- *HPE 4543 First Aid and Safety

NOTE: *Courses are required. Students seeking secondary and/or all-level teacher certification should consult the *Undergraduate Certification Programs in Education* brochure for information on specific courses required in physical education for these certificates, as well as complete information on all requirements for teacher certification.

B. 24 semester hours of course work in Professional Education.

- C&I 3003 The Secondary School Curriculum
- EDP 3003 Introduction to Educational Psychology
- EDU 3003 Educational Sociology
- EDU 3013 The School Environment and Learning Resources
- EDU 4013 Classroom Climate in the Elementary School
- or
- EDU 4093 Teaching in the Secondary School
- EDU 4049 Student Teaching: Secondary
- or
- EDU 4059 Student Teaching: Secondary-ESL
- or
- EDU 4069 Student Teaching: All-Level

NOTE: C&I 3003, EDP 3003, EDU 3003, and 3013 must be taken prior to the Education Professional Semester and Student Teaching. EDU 4013 or 4093 is taken concurrently with Student Teaching (EDU 4049, 4059, or 4069) to comprise the 12 semester hour Education Professional Semester and Student Teaching. Students not seeking teacher certification may, with the approval of the Undergraduate Advisor, substitute appropriate course work equivalent to the number of hours in the Professional Semester to earn a B.S. in Physical Education without certification.

C. 21 semester hours of free electives, 9 of which must be at the upper-division level.

Remaining hours may be taken from any Division in The University. For students seeking the teaching certificate, these hours may be used to partially satisfy additional requirements for a teaching certificate. Students should consult the Office of Teacher Certification and Placement for complete information on all certificate requirements.

COURSE DESCRIPTIONS CURRICULUM AND INSTRUCTION (C&I)

- 3003 The Secondary School Curriculum**
(3-0) 3 hours credit. Prerequisites: Admission to Teacher Certification and completion of EDP 3003, EDU 3003 and 3013.
An overview of the nature, scope and purpose of the secondary school, with special emphasis on curriculum design, classroom management and discipline, secondary methods, and reading in the content areas. Twenty hours of directed field experiences are required. Not offered in the summer.
- 3013 Seminar in Secondary Education.**
(3-0) 3 hours credit.
Emphasis on student learning processes and teaching styles. Topics include, instructional strategies, classroom management, motivation of students, performance, evaluation, and planning for teaching. This course is designed for prospective and current secondary school teachers.
- 3703 Introduction to Developmental Reading**
(3-0) 3 hours credit. Prerequisites: Admission to Teacher Certification and completion of or concurrent enrollment in EDP 3003, EDU 3003, and 3013.
Provides an overview of the development of reading across the grades. Uses information from language development and psychology. Focuses on teaching techniques for developing oral language facility, word identification and comprehension. Considers assessment in reading that can be used with a variety of readers and texts in sociocultural contexts.
- 3713 Introduction to Content Area Reading-Elementary**
(3-0) 3 hours credit. Prerequisites: Admission to Teacher Certification and completion of or concurrent enrollment in EDP 3003, EDU 3003, and 3013.
Study of reading from the perspective of various content areas. Considers the range of reading ability of elementary students, texts used in schools, and strategies for teaching vocabulary and comprehension in the content areas. Emphasis on the elementary and middle school years.
- 3723 Study Skill Development in the Reading Program**
(3-0) 3 hours credit. Prerequisites: C&I 3703 and 3713.
Information processing from lectures and texts to develop understanding of an area of knowledge. Considers locating resources, note taking skills, outlining, test-taking, reading rate and flexibility, reading of graphs and technical information, control strategies and higher order cognitive skills needed for problem-solving in various fields of study.
- 3733 Reading Comprehension Skills**
(3-0) 3 hours credit. Prerequisites: C&I 3703 and 3713.
Offers theoretical framework for and practical application of methods and materials for developing reading comprehension and critical reading skills.
- 3743 Introduction to Reading Problems**
(3-0) 3 hours credit. Prerequisites: C&I 3703 and 3713.
Study of and practical experience with reading problems in the classroom. Techniques for diagnosis and remediation of reading difficulties are emphasized.
- 3753 Reading in the Secondary School**
(3-0) 3 hours credit. Prerequisites: Admission to Teacher Certification and completion of or concurrent enrollment in EDP 3003, EDU 3003, and 3013.
Study of the reading process and of materials and techniques for teaching reading in the context of the secondary school. Attention given to diagnosis and treatment of reading difficulties at the secondary school level.
- 3763 Introduction to Content Area Reading-Secondary**
(3-0) 3 hours credit. Prerequisites: Admission to Teacher Certification and completion of or concurrent enrollment in EDP 3003, EDU 3003, and 3013.
Study of reading from the perspective of various content areas. Considers the range of reading ability of secondary students, texts used, and strategies for teaching vocabulary,

comprehension, and learning in the content areas. Emphasis on the middle school and high school years.

3783 Psycholinguistics and Reading

(3-0) 3 hours credit. Prerequisite: C&I 3703.

Application of psycholinguistic concepts to the teaching of reading. Relationships among cognitive processes, language processes, and reading instruction.

4706 Practicum in Reading

(3-6) 6 hours credit. Prerequisite: 12 semester hours in Reading.

Application of developmental reading procedures in a group setting. Placements arranged for supervised field experiences.

4911-3 Independent Study

1-3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, the Division Director, and the Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4951-3 Special Studies in Curriculum and Instruction

1-3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours within any one discipline will apply to a bachelor's degree.

COURSE DESCRIPTIONS

EARLY CHILDHOOD AND ELEMENTARY EDUCATION (ECE)

3103 Young Children's Literature and Storytelling

(3-0) 3 hours credit.

Review of books, stories, and library materials including media resources for young children. Emphasis on criteria for selection and approaches to presentation. Practice in reading and telling stories to children appropriate to their interest and developmental levels. Field-based experiences required.

3113 Play and Creative Activities in Early Childhood and Elementary Education

(3-0) 3 hours credit.

Study of play as learning and creative expression across curriculum areas. Planning and developing indoor and outdoor environments. Emphasis on the cognitive, psychomotor, affective-social functions of play and peer interaction during preschool and primary grades. Field based experiences required.

3123 Development and Learning in Early Childhood and Elementary Education

(3-0) 3 hours credit.

Study of growth and development during early childhood. Review and integration of physical (health, motor, nutrition), emotional, social, and cognitive development and growth; factors affecting learning and development for normal, handicapped, and culturally different children. Field-based experiences required.

3133 Programs in Early Childhood and Elementary Education

(3-0) 3 hours credit. Prerequisite: ECE 3123.

Survey of historical, philosophical, psychological, and sociocultural foundations of nursery, day-care, prekindergarten and primary materials, methods, and techniques for educating young children. Emphasis on current developments in all areas of the prekindergarten-grade 3 curriculum. Field based experiences required.

3203 Tests and Measurement for Early Childhood and Elementary Education

(3-0) 3 hours credit.

Principles of making and using assessment and evaluation instruments for children in prekindergarten-grade 6. Functions and limitations of informal, norm-referenced and

criterion-referenced measures, standardized tests, and developmental measures. Field based experiences required.

3213 Language Arts in the Elementary School

(3-0) 3 hours credit. Prerequisites: Admission to teacher Certification and completion of/or concurrent enrollment in EDP 3003, EDU 3003, and 3013.

The study of Language Arts as the basis for written and oral communication in the elementary school. Emphasis given to planning, teaching, and evaluating oral and written language lessons with implications for varying instruction to meet individual needs. Attention given to the scope and sequence of the essential elements of elementary English and Language Arts education and working with children with a range of linguistic backgrounds and abilities.

3223 Social Studies in the Elementary School

(3-0) 3 hours credit. Prerequisites: Admission to Teacher Certification and completion of/or concurrent enrollment in EDP 3003, EDU 3003, and 3013.

Planning for instruction in the social studies, including the examination and identification of concepts from the social sciences that are significant for children's academic, social, and personal development.

3233 Mathematics in the Elementary School

(3-0) 3 hours credit. Prerequisites: Admission to Teacher Certification, MAT 1013, MAT 1143, and completion of/or concurrent enrollment in EDP 3003, EDU 3003, and 3013.

Study of and practice in planning for the teaching of mathematics K-8 to normal and exceptional students. Specific attention given to content organization, teaching strategies, questioning, and use of varied materials including computer-assisted learning.

4003 Conceptual Approaches to Teaching in the Elementary School

(2-2) 3 hours credit. Prerequisites: Admission to Teacher Certification and completion of EDP 3003, EDU 3003, and EDU 3013. Must be taken in the semester prior to student teaching. Offered only in the fall or spring terms. Registration contingent on instructor approval of formal application to take the course.

A study of approaches to teaching elementary school curricula. Emphasis on foundations of elementary schooling related to current models and trends in curriculum, instructional development and evaluation, and classroom management. Twenty hours of directed field-based experience required. Not offered in the summer.

4103 Guidance of Young Children in Groups

(2-2) 3 hours credit.

Study of basic teaching skills related to prekindergarten-grade 3 curriculum areas; implementation, organization, evaluation, and professional-ethical decision-making. Emphasis on classroom management and discipline; cultural dynamics; guiding children in task involvement, human interaction, cooperation, and uses of materials; and mainstreaming the developmentally handicapped. Field-based experiences required.

4113 Language Development and Reading in Early Childhood and Elementary Education

(3-0) 3 hours credit.

Introduction to theories of language and cognitive development in young children with implications for language instruction and beginning reading. Review of the development of symbolic logic and language learning needs of culturally and linguistically different children. Field-based experiences required.

4123 Parents and Community Resources in Early Childhood and Elementary Education

(3-0) 3 hours credit.

Study of approaches to parenting education, school and family relationships, cultural dynamics of family relationships, influence of the family on the social, emotional, physical, and cognitive development of the child. Emphasis on parent support systems, parent-teacher-child conferences, children at "risk," community services, family nutrition and health. Field-based experiences required.

4133 The Expressive Modes of Children in the Elementary School

(3-0) 3 hours credit. Prerequisites: Admission to Teacher Certification and completion of/or concurrent enrollment in EDP 3003, EDU 3003, and 3013.

Exploration of visual thinking in elementary education: children's use of imagery in problem-solving, and of imagination, graphic ideation and graphic communication in

varied subject matter areas of the school curriculum. Study of the Fine Arts in the elementary curriculum with emphasis on the scope and sequence of essential elements in elementary arts education, especially children's awareness of visual elements, principles of design, and the cultural heritage of the visual arts and artists.

4213 Science in the Elementary School

(3-0) 3 hours credit. Prerequisites: Admission to Teacher Certification and completion of/ or concurrent enrollment in EDP 3003, EDU 3003, and 3013.

Exploration of science studies in the elementary school: objectives, investigations, and teaching strategies to promote the development of children's science concepts and inquiry skills. Emphasis on planning, teaching, and evaluating science lessons with special attention to teacher questioning for discovery-oriented learning.

4911-3 Independent Study

1-3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, the Division Director, and the Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4951-3 Special Studies in Early Childhood and Elementary Education

1-3 hours credit. Prerequisite: Consent of instructor.

Organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

COURSE DESCRIPTIONS
EDUCATION
(EDU)

2013 Issues in American Education

(3-0) 3 hours credit.

Overview of the basic structure and cultural significance of American education; emphasis on the analysis of conflict, consensus and evaluation, and alternative policy responses. This course may not be counted toward Education degree requirements.

3003 Educational Sociology

(3-0) 3 hours credit.

Study of the ways in which schools can affect and use the social processes in developing the individual; the impact of these on multicultural ethnic, language and social differences; the interrelationships of the school with the family and other societal agencies, particularly in the social and cultural setting of the Southwestern United States. Topics to be covered include: legal and ethical aspects of education; structures, organizations, and styles of management in American school systems, and state and local structure of education.

3013 The School Environment and Learning Resources.

(2-2) 3 hours credit. Prerequisites: Admission to Teacher Certification and completion of/ or concurrent enrollment in EDP 3003 and EDU 3003.

Study of the school through field observations and campus discussions relating to observations, and implications for curriculum content and behavioral expectations. Topics include development of expertise in instructional media and technology including evaluation, selection, utilization and production; and the characteristics, assessment, least restrictive alternatives and admissions, review, and dismissal processes for special students requiring individualized or specialized education programs. Twenty hours of directed field-based experiences required. Not offered in the summer.

4003 Student Teaching: Endorsement

3 hours credit. Prerequisites: Completion of Student Teaching requirements for a basic Teaching Certificate and consent of the Director of Student Teaching. Individuals must apply to the Director of Student Teaching one semester in advance.

Six consecutive weeks of full day student teaching in an endorsement area. Individuals pursuing a Kindergarten Endorsement will student teach in a Kindergarten classroom; individuals pursuing an English as a Second Language Endorsement (ESL) will be placed in a Texas Education Agency approved ESL Program.

NOTE: EDU 4003 may *not* be taken concurrently with EDU 4009, 4019, 4029, 4039, 4049, 4059, or 4069.

4009 Student Teaching: Early Childhood-Elementary

9 hours credit. Prerequisites: Admission to the Professional Semester and consent of the Director of Student Teaching. Individuals must apply to the Director or Student Teaching one semester in advance.

Twelve consecutive weeks of full day student teaching, including six weeks of full days in an elementary classroom (grades one-six) and six weeks of full days in an early childhood classroom (kindergarten or below). Meets student teaching requirement for an Elementary Certificate, Option IV.

NOTE: Individuals may not concurrently pursue this certificate and an English as a Second Language (ESL) Endorsement.

4013 Classroom Climate in the Elementary School

(3-0) 3 hours credit. Prerequisite: Admission to the Professional Semester and permission of the Director of Student Teaching.

Study of and practice in identifying and developing curricular materials, planning for instruction, developing effective elementary classroom climate, and evaluating instructional outcomes particularly in the context of the Southwestern United States. Twenty hours of directed field experience are required. This course may be offered in multiple sections according to the subject matter taught. Not offered in the summer.

4019 Student Teaching: Elementary

9 hours credit. Prerequisites: Admission to the Professional Semester and consent of the Director of Student Teaching. Individuals must apply to the Director of Student Teaching one semester in advance.

Twelve consecutive weeks of full day student teaching in an elementary classroom (grades one-six). Individuals pursuing certification in Bilingual Education or Generic Special Education will be assigned to an elementary classroom with students having identified special needs. Meets student teaching requirements for an Elementary Certificate, Options I, II, and III.

4029 Student Teaching: Elementary-Kindergarten

9 hours credit. Prerequisites: Admission to the Professional Semester and consent of the Director of Student Teaching. Individuals must apply to the Director of Student Teaching one semester in advance.

Twelve consecutive weeks of full day student teaching, including six weeks of full days in an elementary classroom (grades one-six) and six weeks of full days in a kindergarten classroom. Meets student teaching requirements for an Elementary Certificate, Options I, II, and III, with a Kindergarten Endorsement.

NOTE: Individuals may not concurrently pursue both an English as a Second Language (ESL) and a Kindergarten Endorsement.

4039 Student Teaching: Elementary-ESL

9 hours credit. Prerequisites: Admission to the Professional Semester and consent of the Director of Student Teaching. Individuals must apply to the Director of Student Teaching one semester in advance.

Twelve consecutive weeks of full day student teaching, including six weeks of full days in an elementary classroom (grades one-six) and six weeks of full days in a Texas Education Agency approved English as a Second Language (ESL) Program. Meets student teaching requirements for an Elementary Certificate, Options I, II, and III, with an English as a Second Language (ESL) Endorsement.

NOTE: Individuals may not concurrently pursue both an English as a Second Language (ESL) and a Kindergarten Endorsement.

4049 Student Teaching: Secondary

9 hours credit. Prerequisites: Admission to the Professional Semester and consent of the Director of Student Teaching. Individuals must apply to the Director of Student Teaching one semester in advance.

Twelve consecutive weeks of full day student teaching in grades six-twelve. Individuals pursuing a Basic Secondary Certificate, Options I or III, will student teach in the single teaching field for which certification is sought. Individuals pursuing a Basic Secondary Certificate, Options II or IV, will have experience in each of the two teaching fields for which certification is sought. Meets student teaching requirements for a Secondary Certificate, Options I, II, III, and IV.

4059 Student Teaching: Secondary-ESL

9 hours credit. Prerequisites: Admission to the Professional Semester and consent of the Director of Student Teaching. Individuals must apply to the Director of Student Teaching one semester in advance.

Twelve consecutive weeks of full day student teaching in grades six-twelve, including six weeks of full days in one teaching field and six weeks of full days in a Texas Education Agency approved English as a Second Language (ESL) program. Individuals pursuing Bilingual Education or Generic Special Education will student teach six weeks of full days in one teaching field with students having identified special needs, and six weeks of full days in a Texas Education Agency approved English as a Second Language Program. Meets student teaching requirements for a Secondary Certificate, Options I, II, III, or IV, with an ESL Endorsement.

4069 Student Teaching: All-Level

9 hours credit. Prerequisites: Admission to the Professional Semester and consent of the Director of Student Teaching. Individuals must apply to the Director of Student Teaching one semester in advance.

Twelve consecutive weeks of full day student teaching, including six weeks of full days in an elementary school (grades one-eight) and six weeks of full days in a secondary school (grades six-twelve) in the certificate area sought. Meets student teaching requirements for an All-Level Certificate.

NOTE: Individuals may not concurrently pursue an All-Level Certificate and an Endorsement in Kindergarten and/or English as a Second Language (ESL)

4093 Teaching in the Secondary School

(3-0) 3 hours credit. Prerequisite: Admission to the Professional semester and permission of the Director of Student Teaching.

Study of and practice in identifying and developing curricular materials, planning for instruction, developing effective secondary classroom climate, and evaluating instructional outcomes, particularly in the context of the Southwestern United States; the methodology of instruction as related to specific disciplines. Twenty hours of directed field experiences are required. This course may be offered in multiple sections according to the subject matter taught. Not offered in the summer.

4951-3 Special Studies in Education

1-3 hours credit. Prerequisite: Consent of instructor.

Organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4993 Honors Thesis

(3-0) 3 hours credit. Prerequisite: Enrollment limited to candidates for honors in the Division of Education during the last two semesters. Approval by the Honors Program Coordinator.

Supervised research and preparation for an honors thesis. May be repeated once with advisor's approval.

COURSE DESCRIPTIONS EDUCATIONAL PSYCHOLOGY (EDP)

1702 Introduction to Educational Psychology: Applied Cognition and Motivation

(1-1) 2 hours credit.

Application of learning strategies, self assessment and attribution training, examination of transitional stages students experience entering higher education. Focus on total student/master student needs. Laboratory required.

3003 Introduction to Educational Psychology

(3-0) 3 hours credit.

Study of the relationships between human development and learning. Topics include the teaching-learning process; the measurement and evaluation of student achievement; the special nature of exceptional children and youth as learners; and the impact of cultural, ethnic, language, and social differences upon human development and the implications for instructional processes.

3603 Introduction to Exceptionality

(3-0) 3 hours credit.

Study of the nature and characteristics of exceptional children; educational and therapeutic services for exceptional children at the local, state, national and international level, as well as a study of demographics, etiology, and efficiency of delivery systems of services for exceptional children.

3623 Assessment of Exceptional Children

(3-0) 3 hours credit. Prerequisite: EDP 3603 or consent of instructor.

An introduction to both formal and informal assessment procedures. Students are offered the opportunity to train to administer and evaluate the results of informal assessment devices in the areas of life skills, motor development, perception, language and academic subject areas.

3633 Behavior Management of Exceptional Children

(3-0) 3 hours credit. Prerequisite: EDP 3603.

A study of behavior management strategies and techniques to alter, improve, and maintain children's academic and social behaviors. Application of learning theory principles, measurement procedures, knowledge of divergent and convergent theories and practices regarding behavior change strategies, and current and significant research are emphasized.

3643 Language and Cognitive Development and Dysfunction

(3-0) 3 hours credit. Prerequisite or concurrent enrollment: EDP 3603.

Current theories in the areas of language development and cognition are studied in terms of their contribution to the development of a methodology for the education of the exceptional child. Educational programs in the areas of language and cognition are evaluated in terms of their theoretical basis and educational utility.

3653 Working with Exceptional Children (Introductory)

3 hours credit. Prerequisite or concurrent enrollment: EDP 3603 and EDP 3643.

Observation and evaluation of educational procedures and services for exceptional children; observation and recording of the performance of children as learners.

3663 Working with Exceptional Children (Intermediate)

3 hours credit. Prerequisite or concurrent enrollment: EDP 3623 and EDP 3633.

Working with teachers of exceptional children in developing, administering and evaluating assessment of tools; planning language and learning sequences for children.

4603 Working with Parents of Exceptional Children

(3-0) 3 hours credit.

Study of methods and techniques for working with parents of exceptional children and for effecting cooperative home, school, and community relations for the improvement of the child's life and environment.

4653 Working with Exceptional Children (Advanced)

3 hours credit. Concurrent enrollment: EDP 4603.

Field work with teachers in planning and implementing educational sequences for exceptional children.

4951-3 Special Studies in Educational Psychology

1-3 hours credit. Prerequisite: Consent of instructor.

Organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

COURSE DESCRIPTIONS

HEALTH AND PHYSICAL EDUCATION (HPE)

- 1001 Individual and Dual Physical Activity Sports**
(0-3) 1 hour credit.
Practice in the techniques of individual and dual sports. Individual sections focus on particular sports as indicated in the schedule of courses. May be repeated for credit, but not more than 6 hours of HPE 1001 alone or in combination with HPE 1101 will apply to a bachelor's degree.
- 1101 Team Sports**
(0-3) 1 hour credit.
Practice in the techniques of team sports including the practice and development of team skills. Individual sections to focus on particular sports as indicated in the schedule of courses. May be repeated for credit, but not more than 6 hours of HPE 1101 alone or in combination with HPE 1001 will apply to a bachelor's degree.
- 2001 Skill Analysis in Physical Activity: Individual Activities**
(0-3) 1 hour credit.
Specialized activity instruction involving skills, drills, rules and regulations, and skill performance in a variety of selected individual activities.
- 2101 Skill Analysis in Physical Activity: Team Sports**
(0-3) 1 hour credit.
Specialized activity instruction involving skills, drills, rules and regulations, and skill performance in a variety of selected team sports.
- 2303 The Foundations of Physical Education**
(3-0) 3 hours credit.
Orientation of the physical educator to the profession. A study of history, philosophy, principles, objectives, and current concepts in physical education. Special examination of career potential within the profession. Formerly HPE 3403. Credit cannot be earned for both 2303 and 3403.
- 2331 Physical and Motor Assessment**
(0-3) 1 hour credit.
The opportunity to develop individual physical fitness and motor ability profiles for students in physical education. Analysis of strengths and weaknesses in physical capacity.
- 2401 Gymnastics**
(0-3) 1 hour credit.
Practice in gymnastic activities in a balanced physical education program. Formerly HPE 4433. Credit cannot be earned for both 2401 and 4433.
- 2411 Rhythmical Activities and Dance**
(0-3) 1 hour credit.
Practice in rhythmical techniques in physical education and various types of dance.
- 2423 Intramurals and Recreation Programming**
(3-0) 3 hours credit.
Organization and administration of intramural programs, intramural activities, scheduling procedures, tournaments, participation units, officiating, extramurals, and other clubs.
- 2433 Lifetime Sports**
(3-0) 3 hours credit.
Instruction in the development of skills in lifetime sports activities with emphasis on individual and dual sports. Introduction to instructional strategies used in teaching physical activity. Formerly HPE 3433. Credit cannot be earned in 2433 and 3433.
- 2503 The Foundations of Health Education**
(3-0) 3 hours credit.
Study of the history, principles, objectives, and current concepts of health education. Formerly HPE 3503. Credit cannot be earned for both 2503 and 3503.

2513 Personal and Family Health

(3-0) 3 hours credit.

Overview of medical and scientific facts and principles applied to healthful living and prevention and control of diseases. Formerly HPE 4503. Credit cannot be earned for both 2513 and 4503.

3303 Athletic Injuries and Training Procedures

(3-0) 3 hours credit.

Prevention and care of athletic injuries. A study of training and conditioning for the team and individual. Techniques and procedures for emergencies; diagnostic, preventive, and remedial measures and organization of the training room facility.

3413 The Elementary School Physical Education Program

(3-0) 3 hours credit.

Selection of physical education activities for the elementary school program. Theory and practice of methods and techniques pertinent to the elementary school program. Emphasis on traditional teaching and its scope of activities.

3423 The Secondary School Physical Education Program

(3-0) 3 hours credit. Prerequisites: HPE 2303, HPE 2331, HPE 2433.

Selection of physical education activities for the secondary school. Theory and practice of methods, techniques, teaching designs, and organizations in the secondary school program.

3443 Principles of Exercise and Physical Fitness

(3-0) 3 hours credit.

Analysis of the nature of physical fitness, basic principles of exercise and concepts of physical fitness. A study of methods and programs for developing and evaluating physical fitness.

3513 The Elementary School Health Program

(3-0) 3 hours credit.

Study of the health problems of elementary school students as a basis for health instruction; using the Texas Education Agency guidelines as a basis for planning.

3523 The Secondary School Health Program

(3-0) 3 hours credit.

Study of the health problems of secondary school students as a basis for health instruction; using the Texas Education Agency guidelines as a basis for planning.

3533 Drug Education

(3-0) 3 hours credit.

Study of the use and abuse of tobacco, alcohol, and other drugs; other mood and behavior modifiers. An evaluation of motivation in drug abuse. Strategies for teaching drug education.

3543 Physical Growth and Development

(3-0) 3 hours credit.

Review of physical growth and development as dynamic lifetime processes. The changes in early adolescence and implications for teachers.

4113 Evaluation in Physical Education

(3-0) 3 hours credit.

Applications of tests and measurement theory in physical education. Emphasis on selection and administration of appropriate tests and the interpretation of their results by fundamental statistical procedures.

4343 Movement Education

(3-0) 3 hours credit.

Theory and practice of movement education to be used in the elementary school program. Analysis of movement experiences with regard to perceptual motor development, physical fitness, and sports skill development. In-depth study of activities, methods, and techniques used in movement education.

4403 Motor Learning and Skill Performance

(3-0) 3 hours credit.

Study of psychomotor learning, including motor learning theories, motor and skill learning, state of performer, and application of instructional techniques in motor learning and

skill performance. Introduction to psychological and sociological aspects of physical activity.

4413 Coaching Interscholastic Athletics

(3-0) 3 hours credit.

Theory of coaching pertinent to the interschool athletic program. Emphasis on organization and administration in coaching. A study of content and techniques involved in coaching a variety of sports.

4423 Adaptive Physical Education

(3-0) 3 hours credit.

Study of corrective and adaptive activities and programs for the exceptional child. Theory and implication of specific handicaps and disabilities with emphasis on adjustments. Application to exercise and sports programs.

4513 Consumer Health

(3-0) 3 hours credit.

Study of the consumer's selection of health products and services, and the acquisition of basic knowledge regarding consumer health with a view towards providing students with information that will help them make wise decisions when selecting professional health care, services, and products.

4523 Teaching Sex Education

(3-0) 3 hours credit.

Study of the teaching of human sexuality. Emphasis on the understanding of sexual drives and on methods for teaching sex education.

4533 Nutrition Education

(3-0) 3 hours credit.

Study of content, attitudes, and practices regarding nutrition and its effects on health and behavior. Study and assessment of methods of teaching nutrition to young people.

4543 First Aid and Safety

(3-0) 3 hours credit.

A study of evaluation of current first aid and safety skills and information. Emphasis on application of skill in emergency situations. Successful completion of required skills may lead to American Red Cross and American Heart Association certificates.

4911-3 Independent Study

1-3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student's advisor, the Division Director, and the Dean of the College in which the course is offered.

Independent reading, research, discussion and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4951-3 Special Studies in Health and Physical Education

1-3 hours credit. Prerequisite: Consent of instructor.

Organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4956 Internship In Health or Physical Education

6 hours credit. Prerequisite: Consent of instructor.

Supervised internship with selected health or recreational agencies. Recommended for students seeking the degree without teacher certification.

DIVISION OF SOCIAL AND POLICY SCIENCES

The Division of Social and Policy Sciences offers Bachelor of Arts Degrees in Criminal Justice, Geography, Political Science, and Sociology.

At least 30 credit hours of course work are required to fulfill a social and policy sciences major. The 30 hour total is considered a minimum, and students are encouraged to deepen and broaden their control of their field through careful allocation of some of their elective credit hours.

All social and policy sciences majors require the student to complete at least six semester hours of support work. These courses, which require the advisor's advance approval, should serve to introduce the student to aspects of the social sciences in addition to those entailed in the course work within the student's major discipline.

INTERNSHIP STUDY

Majors in the Division of Social and Policy Sciences may apply 3 or 6 semester hours of internship study to their baccalaureate program. Internship entails supervised experience usually within selected organizations in the San Antonio area. Placement is arranged by the Internship Coordinator of the Division of Social and Policy Sciences. Supervision and grading of the internship experience is normally done by Division faculty members. Students from majors other than the social sciences are welcome to participate but should consult with their faculty advisors regarding the role of the internship within their own degree programs. Further information can be obtained from the Internship Coordinator.

DIVISIONAL HONORS

The Division of Social and Policy Sciences designates certain of its outstanding students as Honors students and provides the opportunity for advanced study under close faculty supervision.

Selection of students for admission to the Division Honors Program is based on: 1) the student's academic performance, and 2) recommendation by the faculty of the student's major discipline. To be eligible for the program students must have a minimum grade-point average of 3.00 overall at UTSA and a minimum grade-point average of 3.50 in their major at UTSA. The minimum grade-point averages must be maintained for students to receive the approval of the Division Honors Committee and the discipline faculty. Students admitted to the Honors program are expected to enroll in the appropriate Honors Thesis course during the final two semesters in residence. The completed thesis must be approved by the supervising faculty sponsor and another Divisional faculty member. Students interested in this program should contact their faculty advisors for additional information.

BACHELOR OF ARTS DEGREE IN CRIMINAL JUSTICE

This program is intended to provide the opportunity for a comprehensive study of criminal justice with emphases in Law Enforcement, Corrections-Juvenile Justice, Legal Studies, and Security Management. Students completing the degree may pursue professional careers in government or the private sector as well as apply for admission to law or graduate schools.

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 126. The Criminal Justice major, through consultation with faculty advisors, should choose elective courses within the General Education Requirements which will develop fundamental awareness of the complex social and cultural issues in contemporary American society.

All candidates for the degree must complete:

A. 36 semester hours of upper-division Criminal Justice coursework distributed as follows:

1. 18 semester hours of upper-division core:

- CRJ 3213 Administrative Organization
- CRJ 3623 Substantive Criminal Law
- SOC 3113 Criminology
- SSC 3013 Conceptualization and Measurement in Social Research
- SSC 3023 Social Research Design and Applications
- CRJ 4973 Senior Seminar in Criminal Justice

2. 9 semester hours from one of the following areas of emphasis:

a. Law Enforcement

- CRJ 3133 Basic Criminalistics
- CRJ 4123 Concepts of Investigation
- CRJ 4413 Contemporary Police Practices
- CRJ 4423 Issues in Law Enforcement Administration

b. Corrections-Juvenile Justice

- CRJ 3513 Corrections: Theory and Practice
- CRJ 3533 Correctional Alternatives
- CRJ 3543 Delinquency and Juvenile Justice
- CRJ 4613 Correctional Counseling and Services

c. Legal Studies

- CRJ 3613 Legal Research and Writing
- CRJ 3633 Trial and Evidence
- CRJ 4633 Criminal Procedure
- CRJ 4813 Law, Courts and the Legal System

d. Security Management

- CRJ 3163 Introduction to Security Management
- CRJ 3193 Security Management Practices
- CRJ 4203 Issues in Security Management
- CRJ 4733 Intelligence Programs and National Security

3. 3-6 semester hours of CRJ 4933-6 Internship in Criminal Justice, to be taken in consultation with the student's faculty advisor. 3-6 semester hours of appropriate upper-division coursework may be taken in lieu of the Internship if a student has equivalent employment in a criminal justice position.

4. 6 semester hours to be taken in two of the areas of emphasis *not* selected under A. 2 above.

B. 15 semester hours of upper-division support work, 6 hours of which may be selected from the following:

- BLW 3013 Business Law
- GRG 3513 Urban Geography
- HIS 3183 Law and American Development
- HIS 4003 History of Organized Crime
- MGT 3023 Organizational Behavior
- MGT 3043 Business Communications
- MGT 4203 Business and Society
- POL 3323 Constitutional Law
- POL 3523 Force in International Politics
- POL 4323 Administrative Law

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Criminal Justice**

PSY 4263 Psychology and Law
SOC 3053 Deviance and Conformity
SSC 3113 The Contemporary City
SSC 3203 Violence and Society
SSC 4373 Program Evaluation

C. 33 semester hours of electives, including CRJ 2113 or its equivalent.

**COURSE DESCRIPTIONS
CRIMINAL JUSTICE
(CRJ)**

2113 The American Criminal Justice System

(3-0) 3 hours credit.

Philosophy and history of criminal justice in America; examination of criminal justice agencies operating as an interacting system: police and security agencies, courts, and corrections.

3133 Basic Criminallistics

(3-0) 3 hours credit.

Application of the physical and natural sciences to the administration of criminal justice probability, value and limitation of various types of physical evidence, and basic processing techniques.

3163 Introduction to Security Management

(3-0) 3 hours credit.

Survey of security management in business, industry, and government; consideration of the problems and issues affecting the relationship between publicly-funded law enforcement and the private sector.

3193 Security Management Practices

(3-0) 3 hours credit.

A study of the application of physical, personnel and information security practices. Theory and application of physical protection, employee integrity programs and information control measures. Management perspectives on security program planning, integration and implementation. (Formerly CRJ 3173 and CRJ 3183: Credit can be earned only for CRJ 3193 or CRJ 3173 and CRJ 3183.)

3213 Administrative Organization

(3-0) 3 hours credit. Prerequisite: CRJ 2113 or equivalent recommended.

Theories and applications in the study of criminal justice organizations. Examination of traditional and innovative approaches to justice delivery in public and private agencies.

3513 Corrections: Theory and Practice

(3-0) 3 hours credit.

A study of the history and philosophy of corrections in America. Theories and practices of incarceration; legal and administrative problems in imprisonment; current research on correctional issues.

3533 Correctional Alternatives

(3-0) 3 hours credit.

A study of probation, parole and other community-based correctional programs. Examines policies and procedures; methods of selection and prediction; management and supervision styles; and evaluative research on their effectiveness.

3543 Delinquency and Juvenile Justice

(3-0) 3 hours credit.

Analysis of the extent, distribution and varieties of juvenile crime; examination of major theories of causation, and research on prediction and prevention. History and philosophy of juvenile justice and development of juvenile law and judicial process.

3603 Para-Legal Management Practices

(3-0) 3 hours credit.

Examines the role and function of para-legal management practices in a variety of organizational settings. Integration of theory and practice emphasized.

- 3613 Legal Research and Writing**
(3-0) 3 hours credit.
Detailed study of theory and practice of legal research. Development and refinement of legal writing techniques.
- 3623 Substantive Criminal Law**
(3-0) 3 hours credit. Prerequisite: CRJ 2113 or equivalent recommended.
Jurisprudential philosophy and case study of common law and statutory crimes; includes functions and development of substantive criminal law, elements of specific offenses; defenses.
- 3633 Trial and Evidence**
(3-0) 3 hours credit.
Issues and problems of proof in civil and criminal trials, admissibility, examining witnesses, constitutional considerations, exclusionary rules.
- 4123 Concepts of Investigation**
(3-0) 3 hours credit. Prerequisite: CRJ 3133 or consent of instructor.
Examination of theories and practices of the investigation process in the criminal justice system; specific operational techniques; application of innovative techniques.
- 4203 Issues in Security Management**
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Managerial aspects of security in both public and private sectors; security management issues associated with employment screening and testing; uses of technological devices; legal challenges to security practices; safety-security conflicts; white collar crime; industrial espionage; regulatory constraints; and others.
- 4413 Contemporary Police Practices**
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Examination of the management of law enforcement organizations through administrative structure and process. Analysis of program development and implementation in providing police service.
- 4423 Issues in Law Enforcement Administration**
(3-0) 3 hours credit. Prerequisite: Consent of Instructor.
The major issues confronting law enforcement administration are examined, including those related to personnel, technological change, manpower utilization, civil liability, and programs designed to improve the delivery of law enforcement services.
- 4613 Correctional Counseling and Services**
(3-0) 3 hours credit. Prerequisite: Senior standing or consent of instructor.
The role and techniques of counseling and interviewing in correctional programs. Study of service delivery programs tailored to the specific needs of the correctional clients.
- 4633 Criminal Procedure**
(3-0) 3 hours credit. Prerequisite: CRJ 3623 or consent of instructor.
A procedurally oriented discussion of law of arrest, search and seizure, extradition, jurisdiction and venue, preliminary examination, bail, the grand jury, indictment and information, arraignment, trial and review, probation, parole, and pardon.
- 4713 Organized and White Collar Crime**
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Study of the development of organized and white collar criminal activity through generic and legal definitions. Federal and state relationships in the response of the criminal justice system to these phenomena.
- 4723 The Media and Criminal Justice**
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Impact of radio, television, motion pictures, records, books, and newspapers on the public's perception of criminal justice; media images of events, conditions and people associated with the criminal justice system.
- 4733 Intelligence Programs and National Security**
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Examines a wide range of issues concerning intelligence and national security.

4743 Crime in Fiction

(3-0) 3 hours credit.

An examination of the links between fictional characterizations of crime and justice, social conditions and non-fictional research findings through such authors as Chekov, Dickens, Dostoyevsky, Norris, Puzo, Twain, Wright, Wambaugh and others.

4753 Criminal Justice Policymaking

(3-0) 3 hours credit.

Examines the response of law and the justice system to crime and violence. Emphasis is given to the origins, incentives, conditions, organizations, initiatives and outcomes involved in criminal justice policymaking.

4763 Great Controversies in American Justice

(3-0) 3 hours credit.

An intensive study of major legal and social controversies in American justice, both historical and contemporaneous. Emphasis is given to matching concepts, theories and models of justice with factual events, laws, administrative decisions and policies, and judicial holdings.

4813 Law, Courts and the Legal System

(3-0) 3 hours credit.

Examines American court systems, state and federal, their powers, remedies, limitations, procedures under the case method in civil and criminal matters; the contributions of courts to governance and how they produce or fail to provide justice.

4913 Independent Study

3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, the Division Director, and the Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4933-6 Internship in Criminal Justice

3 or 6 hours credit. Prerequisites: CRJ 3213 and 3623; SOC 3113; at least one course in area of emphasis; consent of academic advisor and Internship Coordinator prior to registration.

Supervised experience in an administrative setting which provides the opportunity to integrate theory and practice in criminal justice agencies. May be repeated for credit when agency setting varies, but no more than 6 hours will apply to a bachelor's degree.

4951-3 Special Studies in Criminal Justice

1 to 3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but no more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4973 Seminar in Criminal Justice

(3-0) 3 hours credit. Prerequisite: Senior standing and consent of instructor.

A seminar reserved for criminal justice majors during their senior year. Review of significant new research or case studies in criminal justice; individualized research projects may be required. May not be repeated for credit.

4993 Honors Thesis

(3-0) 3 hours credit. Prerequisites: Enrollment limited to candidates for honors in criminal justice during their last two semesters; completion of honors examination and approval by the Honors Program Coordinator.

Supervised research and preparation of an honors thesis. May be repeated once with advisor's approval.

BACHELOR OF ARTS DEGREE IN GEOGRAPHY

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 120.²⁰

All candidates for the degree must complete:

- A. 33 semester hours in the *major*, 24 of which must be at the upper-division level.
 1. 18 semester hours of required courses are:
 - a. 6 semester hours:
GRG 2613 Physical Geography
GRG 2623 Human Geography
 - b. 6 semester hours from:
GRG 3113 Geography of the U.S. and Canada
GRG 3123 Geography of Latin America
GRG 3153 Geography of Texas
GRG 3163 Geography of the American West
 - c. 6 semester hours: SSC 3013 Conceptualization and Measurement in Social Research; and SSC 3023 Social Research Design and Applications
 2. 15 additional semester hours of geography electives chosen in consultation with the student's advisor. A maximum of six of these hours *may* be applied to the major from:
ANT 3223 Cultural Ecology
CRJ 2113 The American Criminal Justice System
ECO 4303 Economic Problems of Emerging Nations
ENV 3023 Man and His Natural Resources
GEO 4063 Principles of Environmental Geology
MKT 4093 Consumer Behavior
POL 3413 The Politics of Urban Development
POL 3473 Theories and Problems in Latin American Politics
PSY 2533 Social Psychology
PSY 2553 Perception
SOC 3023 Urban Sociology
SOC 3033 Population Dynamics
SOC 3073 Migration and Adjustment
SOC 3173 Economy and Society
SSC 3113 The Contemporary City
- B. 6 semester hours of courses in the social sciences outside the major, chosen with the consent of the advisor.
- C. 39 semester hours of *electives*.

COURSE DESCRIPTIONS GEOGRAPHY (GRG)

1013 Fundamentals of Geography

(3-0) 3 hours credit.

Introduction to the study of physical and cultural features on the earth, their distributions, causes and consequences to man. Topics include landforms, climate, population and food, perception and migration, economic growth and urbanization.

²⁰Thirty-nine of the total semester hours required for the degree must be at the upper-division level.

Students seeking teacher certification should consult the Undergraduate Certification Programs in Education brochure for information.

2613 Physical Geography

(3-0) 3 hours credit.

Study of the earth's major landforms and climatic patterns, the processes giving use to these patterns, and their relationship to human activity.

2623 Human Geography

(3-0) 3 hours credit.

Study of the relationship between the social and spatial structure of society, including spatial perception, human territoriality, innovation diffusion, migration, and spatial planning.

2633 World Regional Geography

(3-0) 3 hours credit.

Study of the world's regions, focusing on salient physical, cultural, economic, and political characteristics, including physiography, climate, natural resources, population, economic structure and development, urban growth, cultural institutions, and political structure. Regions include North America, Latin America, Europe, Middle East/North Africa, Sub-Saharan Africa, South Asia, East Asia, USSR, and Australasia.

3113 Geography of the U.S. and Canada

(3-0) 3 hours credit.

Selected geographic aspects of the major regions of the United States and Canada, emphasizing current social and economic issues in these regions.

3123 Geography of Latin America

(3-0) 3 hours credit.

Selected geographic aspects of Mexico, Central America, the West Indies, and South America.

3153 Geography of Texas

(3-0) 3 hours credit.

An analysis of the physical, economic, and cultural patterns of the State of Texas as they vary across its geographic regions. Examines physical and settlement patterns, evaluation of regional economies, population and regional growth issues.

3163 Geography of the American West

(3-0) 3 hours credit.

Study of the region's diverse physical geography, the relationship between transportation, natural resources, and the developing American frontier, the past and present geography of Native Americans, and the cultural ecology of pioneer settlement.

3213 Cultural Geography

(3-0) 3 hours credit.

Study of human culture hearths, the distribution of languages and religion, environmental perception, environmental determinism, and human settlement patterns.

3313 Cartography

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

The design, construction, and reproduction of maps; the history of mapping and cartographic theory.

3323 Spatial Analysis

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

Application of mathematical and statistical analysis to spatial data. Topics may include geographic sampling, spatial pattern analysis, and techniques of areal association and classification.

3513 Urban Geography

(3-0) 3 hours credit.

Topics include the relationship between the physical environment and urbanization; the origin and evolution of cities; urban hierarchies; models of internal structure; and land uses in American, Third World, and other urban centers.

3523 Introduction to Urban Planning

(3-0) 3 hours credit.

An introduction to the nature, use, purpose, and preparation of a master plan for the future physical growth and development of a community. The course focuses on the

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planning process by which a city prepares and implements its master plan. (Formerly URB 3723: Credit cannot be earned for both GRG 3523 and URB 3723.

3533 Geography of Economic Activity

(3-0) 3 hours credit.

Analysis of production at local, regional, and national scales. Agricultural and industrial location and the growth and influence of central places are discussed.

3613 Conservation of Resources

(3-0) 3 hours credit.

A survey of the distribution of world resources, with special emphasis on new and novel solutions to problems of resource scarcity. Topics include food, scenic and recreational resources, and other selected components of the biosphere and lithosphere.

3633 Geography of Development

(3-0) 3 hours credit.

Survey and analysis of economic growth and social change in different parts of the world. Topics may include the evolution of global inequalities, the definition of development, the impacts of population growth and migration, and the role of agriculture, industry, and transportation.

3713 Weather and Climate

(3-0) 3 hours credit.

Analysis of the elements and causes of daily weather, climatic classification, and climatic change. Study of world distributions and components of climate.

3733 Urban and Regional Analysis

(3-0) 3 hours credit.

Applied models of urban and regional growth, structure, interaction, influence, and inequality over space, with emphasis on the United States. Stresses practical skills.

4911-3 Independent Study

1-3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, the Division Director, and the Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4933-6 Internship in Geography

3 or 6 hours credit. Prerequisite: Consent of internship coordinator.

Supervised experience relevant to geography within selected community organizations. A maximum of 6 credit hours may be earned through Internship in Geography.

4951-3 Special Studies In Geography

1-3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4993 Honors Thesis

3 hours credit. Prerequisite: Enrollment limited to candidates for honors in geography during their last two semesters; completion of honors examination and approval by the Honors Program coordinator.

Supervised research and preparation of an honors thesis. May be repeated once with advisor's approval.

**BACHELOR OF ARTS DEGREE IN
POLITICAL SCIENCE**

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 120.²¹

²¹Thirty-nine of the total semester hours required for the degree must be at the upper division level.

Students seeking teacher certification should consult the Undergraduate Certification Programs in Education brochure for information.

**256 / Bachelor of Arts Degree in Political Science
Political Science**

All candidates for the degree must complete:

- A. 33 semester hours are required to complete the *major*, 24 of which must be at the upper-division level. Courses must be selected in the following manner:
 1. 6 semester hours of courses from POL 2503-2693
 2. SSC 3013 Conceptualization and Measurement in Social Research
 3. 18 semester hours of political science electives, fifteen of which must be at the upper-division level, with at least 3 hours in each of the following areas:
 - (a) American Politics
 - (b) Political Theory, chosen from the following:
 - POL 3103 Political Ideology
 - POL 3113 American Political Theory
 - POL 3133 Political Philosophy: Ancient and Medieval
 - POL 3143 Political Philosophy: Modern
 - POL 3153 Political Philosophy: Contemporary
 - (c) Comparative Politics or International Relations
 - (d) Public Administration or Public Law
 4. 3 semester hours of Social Science Courses (SSC)
 5. One senior level seminar from courses POL 4153, POL 4973 or designated sections of POL 4953.

Up to 6 hours may be applied to the major from:

 - ECO 3273 Public Choice and the Public Finances
 - HIS 3093 United States Constitutional History
 - SOC 3013 Social Stratification
 - SOC 3103 Complex Organizations
 - SOC 3123 Survey Research Methods
 - SOC 3173 Economy and Society
 - SSC 3103 Major Theories of the Social Sciences
 - SSC 3533 Inter-American Relations
 - SSC 4353 Leadership and Elites
- B. 6 semester hours of courses in the social sciences outside the major chosen with consent of the advisor.
- C. 39 semester hours of *electives*.

**COURSE DESCRIPTIONS
POLITICAL SCIENCE
(POL)**

1023 The Politics of the American Economy

(3-0) 3 hours credit.

The Constitution, the courts and government economic intervention. The new industrial state. Corporations, unions, and government. Consumer politics. Fiscal and monetary policy. The budget. Applies to the legislative requirement in United States government. (Formerly POL 2063; credit cannot be earned for both 1023 and 2063.)

1053 Introduction to American Politics

(3-0) 3 hours credit.

Constitutional theory and political practice in the United States. Political behavior, parties and pressure groups, the Presidency and Congress, the judiciary, contemporary public policy issues. Applies to the legislative requirement in United States government.

1083 The United States in the World

(3-0) 3 hours credit.

The development of conceptions of the United States' role in the world. The foreign policy decision-making process and its legal and constitutional basis. The relationship of domestic politics to the conduct of foreign policy. Applies to the legislative requirement in United States government.

1133 Introduction to Texas Politics

(3-0) 3 hours credit.

Constitutional theory and political practice in Texas. Constitutional development, the Governor and the Legislature, the judiciary, parties, pressure groups, county, city, and town government. Applies to the legislative requirement in Texas government. (Formerly POL 1043; credit cannot be earned for more than 3 hours from among 1043, 1133, 1143 and 2043.

1173 American State and Local Politics

(3-0) 3 hours credit.

A comparative examination of state constitutions, governmental structures, and politics, with special emphasis on Texas. Applies to the legislative requirement in Texas government. (Formerly POL 2073; credit cannot be earned for both 1173 and 2073.)

2023 Civil Liberties in American Law and Practice

(3-0) 3 hours credit.

The Bill of Rights and its contemporary application in the United States. The theory and history of civil liberties in America. Freedom of religion and expression; privacy; legal due process; equal protection; etc. Applies to the legislative requirement in United States government.

2083 Current Issues in World Politics

(3-0) 3 hours credit.

An examination of the issues which divide the people of the world. The structure of contemporary world problems will be studied and possible strategies for the reduction of international conflict will be assessed. Topics may include nuclear proliferation, world hunger, revolution and intervention, transnational enterprises, competing ideologies of international relations, and global ecology.

2503 Introduction to Political Theory

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

The fundamental concepts and problems of politics, as viewed by the classical political philosophers and contemporary theorists; justice, power, authority, obligation, freedom, equality.

2513 Public Administration and Public Policy

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

The role of bureaucratic agencies in the formulation and implementation of public policy. Organization theory and administration in the public sector. While the approach of the course is comparative, special emphasis is placed on bureaucracy in the United States.

2533 Introduction to Political Science

(3-0) 3 hours credit.

An introduction to the discipline of political science, with particular emphasis devoted to its development from 1880 to the present. Topics may include types of political institutions, uses of political science, participation by political scientists in public affairs or public policy, and career options available to political science majors.

2603 International Politics

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

The major issues of North-South and East-West conflicts will be explored. International aid and trade, transnational enterprises, economic development and debt, military conflicts and nuclear weapons, and the new frontiers of oceanic resources, tropical forests, and outer space.

2623 Law and Society

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

An examination of the role of law in society. Topics examined may include: natural law; legal realism; constitutional, statutory, common, civil, socialist, and administrative law. The structure and functions of the judiciary, police, and legal profession.

2633 Comparative Politics

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

A comparative examination of the diverse forms, goals, styles, and practices of government in Western, Communist, and developing societies. Several major polities will be studied in detail.

3083 Ethnic Politics in the United States

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

The role of ethnic and racial minorities in the politics of the United States; the responsiveness of existing political structures to ethnic problems; ethnic political organizations and influence.

3093 Mexican-American Politics

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

This course provides an opportunity to study Mexican-American participation in the electoral process, political and economic institutions, labor organizations, and alternative modes of political action.

3103 Political Ideology

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

An examination of ideology as a social phenomenon affecting political behavior, and of the specific doctrines of liberalism, socialism, conservatism, fascism, and Communism.

3113 American Political Theory

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

The political theory of the Constitution; the Federalist Papers; Adams; Jefferson; Paine; Calhoun; Thoreau; Social Darwinism; Pragmatism; twentieth-century political thought.

3133 Political Philosophy: Ancient and Medieval

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

The major works of Western political philosophy from ancient times to the Renaissance. Writers examined may include Plato, Aristotle, Thucydides, Augustine, Machiavelli.

3143 Political Philosophy: Modern

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

The major works of political philosophy from the Renaissance to the nineteenth century. Writers examined may include Hobbes, Locke, Rousseau, Hegel, Marx, Mill.

3153 Political Philosophy: Contemporary

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

Political thought from the late nineteenth century to the present. Topics examined may include contemporary Marxism and critical theory, analytic political theory, positivism and social science, phenomenological approaches, existentialism, contemporary ethics.

3223 Judicial Politics

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

Political behavior of the major participants in the judicial process: judges, attorneys, juries, defendants, litigants; the political and administrative context of the judicial process; judicial-executive and judicial-legislative relations; the impact of court decisions.

3233 Political Campaigns and Elections

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

A study of the ways in which public officials are recruited and elected in the United States and other democracies. Campaign strategy and tactics; nominations and primaries; the legal framework of elections; the problem of constituency; voting studies; campaign finance.

3243 Political Socialization, Mass Media, and Public Policy

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

This course explores the acquisition of political attitudes, the role of the mass media in society and politics, and the relationship between political attitudes and values, the mass media and public policy. (Formerly POL 3253, 3263, and 3273. Credit cannot be earned for POL 3243 and POL 3253, 3263 or 3273 or PSY 3353 or SOC 3163.)

3283 The American Presidency

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

The President's role in the American political system. Topics may include the constitutional framework and historical development of presidential powers. Presidential personality. Legislative, foreign policy, and war-making powers. (Formerly POL 3303; credit cannot be earned for both POL 3303 and 3283.)

3313 The American Federal System

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

The political theory of federalism; the constitutional provisions; interstate coordination of policies; local-state-federal relations; the political role of private and public interests within the federal framework.

3323 Constitutional Law

(3-0) 3 hours credit. Prerequisite: POL 2023, 2623, or HIS 3093, or consent of instructor. An examination of major constitutional issues, past and present, through the intensive study of leading cases. Recommended for pre-law students. Applies to the legislative requirement in United States government.

3333 Political Power

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

A theoretical and empirical analysis of power in the political setting. Group, elite, organizational, and structural approaches will be considered. Case studies of the translation of economic and social power into political power.

3363 Political Parties and Interest Groups

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

The function of political parties on the political process; and interest groups, their function as private governments and their role in shaping public policy.

3373 The Legislative Process

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

The functions, structures, and politics of legislatures and their relationships to their constituencies and other branches of government.

3383 Comparative Communist Politics

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

A comparative examination of government and politics in selected Communist states, such as East Germany, Yugoslavia, China, and Cuba. The ideological, cultural, and economic setting of politics. The international relations of Communist states.

3393 Latin American Politics

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

An examination of political institutions and their relationship to social and economic change in Latin America. Course will emphasize profiles of major Latin American countries, such as Mexico, Brazil, Argentina, Peru, and Cuba.

3403 European Politics

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

The interplay of politics with the changing social and economic environment in the advanced industrial societies of Western Europe. Elites, participation, governmental structures, party systems, interest groups, and public policy will be examined in several selected polities and the Common Market.

3413 The Politics of Urban Development

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

This course offers an opportunity to pursue a political-economic analysis of the metropolis focusing on the problems and conflicts stemming from urban growth and stagnation. Topics examined may include uneven development, planning, industrial development policy, taxation, intergovernmental rivalry. Case studies may be drawn from societies other than the U.S.

3423 Politics in the Soviet Union

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

Ideology, politics, and government in the Soviet Union. The social and economic context.

3443 Asian Politics

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

A comparative examination of the political systems of selected Asian nations and their attempts to deal with problems of social, economic, and political change. Nations studied may include Japan, China, India, and Korea.

3453 The Politics of Mexico

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

Background to contemporary political system of Mexico, including Independence, foreign intervention, the Diaz regime, and the 1910-17 revolution. Other topics may include the constitution, the structure of government, political parties, the presidency, economic development and policy, contemporary leadership and elites.

3463 Politics of the Third World

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

The political system of various Third World nations. An inquiry into the political and economic problems of these countries, such as development, instability, political change. (Formerly POL 3423; credit cannot be earned for both POL 3423 and POL 3463.)

3473 Theories and Problems in Latin American Politics

(3-0) 3 hours credit. Prerequisite: One of the following: POL 3393, POL 3453, SSC 3533, HIS 2533, or consent of instructor.

Advanced survey of major theories about Latin American problems and major problems in Latin American political and economic development. Theories of dependency, corporatism, bureaucratic authoritarianism, and transitions of democracy. Selected problems such as political stability, land reform, economic integration, multinational corporations, inflation, foreign debt, revolution and reform, military in politics.

3503 American Foreign Policy Since World War II

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

Major private interests and public institutions involved in American foreign policy-making; public opinion and foreign involvement; specific policies toward international organizations and major world regions.

3513 International Organizations

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

Major issues involving international organizations; nationalism and globalism; financing problems; international staffing; voting patterns; peacekeeping; international conferences. Organizations to be examined include the United Nations system, regional development banks, alliance systems, cartels, and common markets.

3523 Force in International Politics

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

An examination of modern research into the use of coercion in international relations; specifically economic sanctions, war, and terrorism. Special emphasis will be placed on the causes, trends, and consequences of interstate wars. Peace movements and the technologies of peace-making will also be covered.

3543 Soviet Foreign Policy

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

An examination of the theory and practice of Soviet involvement in the world. Topics may include the legacy of the Russian Empire, institutions involved in foreign policymaking, structure of foreign aid and trade, and specific policies toward the world's major regions.

3603 Public Policy Formulation and Implementation

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

An analysis of public policy formulation and implementation in their social and political contexts. The implications of the policy process for democracy. Problem areas may include energy, health, the environment, and the fiscal crisis.

3613 Public Budgeting and Taxation

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

An examination of the process and politics of public budgeting and taxation, and of the bureaucratic behavior accompanying it.

3623 Public Policy Evaluation

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

The process and politics of public policy evaluation. The methodology of program evaluation will be examined as well as the political problems associated with policy evaluation. Case studies of specific government programs will be examined.

3703 Personnel Administration in the Public Sector

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

A survey of personnel management in the public sector. Topics examined may include recruitment, civil service and patronage appointments, career development, manpower utilization, conflict of interest questions, employee organization and relations, affirmative action.

3713 Comparative Systems of Public Administration

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

Administrative goals, structures, processes, and behavior in comparative perspective. Bureaucracies in Western democratic, Communist, and developing political systems will be examined.

3723 Ethics in Government

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

The philosophical, legal, and practical problems of establishing accountability in government and promoting ethical standards among government officials.

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3733 Urban Human Resources Policy

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

Explores the basic relationships between government, citizens and those forces that affect the dispensation of government largesse. The manpower programs and policies of municipal government and the ability of public agencies to manage human resources and other social services programs will be examined in detail. (Formerly URB 3013; credit cannot be earned for both POL 3733 and URB 3013.)

4153 Seminar in Jurisprudence

(3-0) 3 hours credit. Prerequisite: Fulfillment of general education political science requirements.

An analytic inquiry into the normative, empirical and ideological underpinnings of law. The functions, nature, and utilities of law in various social and conceptual schemes. Alternatives to formal law and jural dispute settling.

4323 Administrative Law

(3-0) 3 hours credit. Prerequisite: POL 2023, 2513, or 2623, or consent of instructor.

A survey of those aspects of public law of particular relevance to public administration, analyzing such problem areas as the delegation of authority formal accountability, open records and confidentiality, and responsiveness to democratic value in decision making.

4911-3 Independent Study

1-3 hours credit. Prerequisites: Permission in writing (form available) of the instructor, the student's advisor, the Division Director, and the Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4933-6 Internship in Political Science

3 or 6 hours credit. Prerequisite: Consent of Internship Coordinator.

Supervised experience relevant to political science within selected community organizations. A maximum of 6 credit hours may be earned through Internship in Political Science.

4951-3 Special Studies in Political Science

1-3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4973 Seminar in Political Science

(3-0) 3 hours credit. Prerequisite: Consent of instructor. Enrollment limited to juniors and seniors majoring in political science.

The opportunity for an intensive study of a selected topic. Primary emphasis on supervised research on various aspects of the topic. May be repeated for credit when topics vary.

4993 Honors Thesis

3 hours credit. Prerequisite: Enrollment limited to candidates for honors in political science during their last two semesters; completion of honors examination and approval by the Honors Program coordinator.

Supervised research and preparation of an honors thesis. May be repeated once with advisor's approval.

BACHELOR OF ARTS DEGREE IN SOCIOLOGY

The minimum number of semester hours required for this degree, including the 42 hours of General Education Requirements, is 120.²²

²²Thirty-nine of the total semester hours required for the degree must be at the upper-division level.

Students seeking teacher certification should consult the Undergraduate Certification Programs in Education brochure for information.

All candidates for the degree must complete:

A. 33 semester hours in the *major*, 24 of which must be at the upper-division level.

1. 18 semester hours of required courses are:

- a. SOC 1013 Introduction to the Study of Society
- b. SOC 3003 Sociological Foundations. No more than 9 hours of upper-division Sociology may be taken at UTSA before completing SOC 3003.
- c. SOC 3153 Classical Sociological Theory
SOC 3183 Contemporary Sociological Theory
- d. 6 semester hours of methods courses from:
SSC 3013 Conceptualization and Measurement in Social Research and either
SSC 3023 Social Research Design and Applications
or
SOC 3123 Survey Research Methods
- e. SOC 4973 Sociology Senior Seminar, or
SOC 4993 Honors Thesis

2. 15 additional semester hours of sociology electives. To encourage students to develop specific interest-areas, six hours may be selected from the following, in consultation with the student's advisor:

- AMS 2013 Basic Issues in American Culture
- ANT 3223 Cultural Ecology
- CRJ 2113 American Criminal Justice System
- CRJ 3543 Delinquency and Juvenile Justice
- EDU 3003 Educational Sociology
- GRG 3513 Urban Geography
- GRG 3523 Introduction to Urban Planning
- HIS 3033 American Reform
- LNG 3833 Sociology of Language
- MGT 3023 Organizational Behavior
- POL 2623 Law and Society
- POL 3243 Political Socialization, Mass Media, and Public Policy
- POL 3333 Political Power
- PSY 2533 Social Psychology
- PSY 3023 Social Psychology of Small Groups
- PSY 4133 Social and Personality Development
- SSC 3103-4953 (any course)

B. 6 semester hours of support work in the social sciences outside the major chosen with the consent of the advisor.

C. 39 semester hours of *electives*

It is *strongly* recommended that theory and research methods requirements be completed by the first semester of the junior year.

COURSE DESCRIPTIONS

SOCIOLOGY (SOC)

1013 Introduction to the Study of Society

(3-0) 3 hours credit.

An introduction to the study of human groups, the relations of individuals to groups, and the process of becoming a group member and functioning in a group setting.

2013 Social Problems

(3-0) 3 hours credit.

An examination of major contemporary social problems, their causes and consequences. Topics may include poverty, racism, sexism, deviance and crime, drug and alcohol dependence, the urban crisis, over-population, war.

2053 Marriage and the Family

(3-0) 3 hours credit.

A sociological analysis of the modern family and marriage, its structures and functions, variant patterns and the influence of contemporary society on this institution. Topics may include: dating, marital roles, divorce, child-raising, and alternative life styles.

3003 Sociological Foundations

(3-0) 3 hours credit.

A seminar for new sociology majors to orient them to central themes in sociology, encourage development of critical thinking, notetaking and communication skills, offer training in library research and report preparation, consider the uses of sociology in the real world, and stimulate the sociological imagination.

3013 Social Stratification

(3-0) 3 hours credit. Prerequisite: SOC 1013.

Theory and research pertaining to inequalities of power, prestige, and economic privilege. Major emphasis upon inequality and social mobility in the United States.

3023 Urban Sociology

(3-0) 3 hours credit. Prerequisite: SOC 1013.

Development of modern world cities, the ecology of cities, the organization of cities, major social problems, the social psychology of urban life for both more developed and less developed countries. (Formerly SOC 2023; credit cannot be earned for both 2023 and 3023.)

3033 Population Dynamics

(3-0) 3 hours credit.

Trends in mortality, fertility, and migration for selected countries and their projected consequences. Associated population policies and options are considered. (Formerly SOC 2033; credit cannot be earned for both 2033 and 3033.)

3043 Race and Ethnic Relations

(3-0) 3 hours credit.

Dominant-subordinate relations in world societies, with major emphasis on the United States. Models of assimilation, colonial and class society and consequences for minority and majority populations may be examined. (Formerly SOC 2063; credit cannot be earned for both 2063 and 3043.)

3053 Deviance and Conformity

(3-0) 3 hours credit.

Consideration of sociological and social psychological factors associated with compliant and deviant behavior; the links between deviance and strategies for social control.

3063 Collective Behavior

(3-0) 3 hours credit. Prerequisite: SOC 1013.

Case studies and associated theory dealing with various forms of collective behavior and social movements, including mobs, revolutions, cults and panics.

3073 Migration and Adjustment

(3-0) 3 hours credit. Prerequisite: SOC 1013.

Geographic movement of populations, ties to economic, physical, ideological and social features and resultant problems of adjustment. Historical as well as contemporary examples will be examined. Attention will be given to both legal and illegal immigration.

3083 Social Change

(3-0) 3 hours credit. Prerequisite: SOC 1013.

Principal models and theories of social transformation applied to examples of societal change.

3093 Religion and Society

(3-0) 3 hours credit. Prerequisite: SOC 1013.

Religious institutions and movements in the United States with comparative data from other countries. The relationship of religious institutions to social stratification, economic institutions, and political and social change.

3103 Complex Organizations

(3-0) 3 hours credit. Prerequisite: SOC 1013.

The sociology of public and private bureaucratic organizations, the structure and behavior of management, and patterns of mobility within corporate organizations.

3113 Criminology

(3-0) 3 hours credit.

Examination of government and social policies and programs designed to deal with crime. Analysis of different types of crime, including street crime, organized crime, political crime and white collar crime. Considers social and legal responses to crime.

3123 Survey Research Methods

(3-0) 3 hours credit. Prerequisite: SSC 3013, or its equivalent, and consent of instructor.

A course in survey research, including research design, questionnaire construction sampling, interviewing, control procedures, and data processing. (Formerly SOC 4103: Credit cannot be earned for both 4103 and 3123.)

3133 Sociology of Pluralism in the Southwest

(3-0) 3 hours credit. Prerequisite: SOC 1013.

The principal minority groups in the American Southwest, with emphasis on form and consequences of intergroup relations, social movements, and related social changes, and formal models of Southwestern plural society.

3153 Classical Sociological Theory

(3-0) 3 hours credit. Prerequisite: SOC 1013.

The transition from social philosophy to sociology, with special emphasis upon European theorists in the nineteenth and early twentieth centuries. (Formerly SOC 4143: Credit cannot be earned for both SOC 4143 and SOC 3153.)

3173 Economy and Society

(3-0) 3 hours credit. Prerequisite: SOC 1013.

The relationship of the economic system to the social system as a whole in selected societies. The varieties of capitalist and socialist economic organizations, and their social implications.

3183 Contemporary Sociological Theory

(3-0) 3 hours credit. Prerequisite: SOC 1013.

An examination of current trends in sociological theory: contemporary functionalism, evolutionism, exchange theory, radical criticism, phenomenology and symbolic interactionism, and formal theory construction. (Formerly SOC 4163: credit cannot be earned for both 4163 and 3183.)

3193 The Sociology of Work and Occupations

(3-0) 3 hours credit. Prerequisite: SOC 1013.

Occupational structures in selected societies. The relationship between occupations and economic rewards, life styles, and world view. Determinants of work satisfaction.

✓ **3203 Gerontology**

(3-0) 3 hours credit. Prerequisite: SOC 1013.

An examination of the role of older persons in selected societies and the distinctive problems which they confront.

✓ **3213 Medical Sociology**

(3-0) 3 hours credit. Prerequisite: SOC 1013.

The identification of social factors in the distribution and cause of disease; relationships between patients and medical professionals; the contribution of lay belief to health, illness, treatment and recovery; health institutions; the distribution of medical resources and organization of health care delivery.

3233 Sociology of Adult Life

(3-0) 3 hours credit. Prerequisite: SOC 1013.

Examines how a person's life history develops out of individual, social and historical influences. Also surveys research on age patterns in work, family and community participation. May include the writing of a life history.

3253 The Individual and Society

(3-0) 3 hours credit. Prerequisite: SOC 1013.

An examination of major theories dealing with the effects of culture and social structure on the development and functioning of the personality and the self.

3283 Poverty

(3-0) 3 hours credit. Prerequisite: SOC 1013.

The causes and consequences of poverty in the United States and selected other societies. An examination of social programs designed to combat poverty.

3293 Sex Roles

(3-0) 3 hours credit. Prerequisite: SOC 1013.

The nature of sex roles in our own and other societies. Consideration of how people learn sex roles and the outcomes of this learning for individuals, families, and societies. Alternatives to conventional sex roles.

3303 Women at Work

(3-0) 3 hours credit. Prerequisite: SOC 1013.

Patterns of female labor force participation, their causes and consequences will be discussed. Relationships between women's work roles and their other roles will be considered.

3403 Mexican American Stratification

(3-0) 3 hours credit. Prerequisite: SOC 1013.

A course offering the opportunity to study the variables affecting the social status of Mexican Americans and relations between this group and the dominant society. Issues studied may include the position of Mexican Americans in economic, political and status hierarchies and the major factors limiting mobility within these systems.

3463 Sociology of Sport and Leisure

(3-0) 3 hours credit. Prerequisite: SOC 1013.

This course will examine the social meanings of play and leisure in advanced industrial societies. Emphasis will be on the origins, structure and function of these phenomena in the United States with major emphasis on sport as an institution.

✓ 4173 Comparative Family Structures

(3-0) 3 hours credit. Prerequisite: SOC 1013.

A review of research comparing major conventional and alternative family structures in pre-industrial and industrial societies.

4203 Applied Community Studies

(3-0) 3 hours credit. Prerequisite: SOC 1013.

An examination of theories, methods, and techniques of field work. The course will consider research in organizations, communities, and other settings, and ethical problems involved in such research.

4911-3 Independent Study

1-3 hours credit. Prerequisites: Permission in writing (form available) from the instructor, the student's advisor, the Division Director, and the Dean of the College in which the course is offered.

Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4933-6 Internship in Sociology

3 or 6 hours credit. Prerequisites: Two upper division Sociology courses and consent of internship coordinator.

This course offers supervised work experience relevant to sociology within selected organizations and agencies. Internships selected should be relevant to previous course work. Students will meet regularly as a group to discuss internship experiences in light of sociological issues. A maximum of six credit hours may be earned through internship in sociology.

4951-3 Special Studies in Sociology

1-3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a bachelor's degree.

4973 Sociology Senior Seminar

(3-0) 3 hours credit. Prerequisites: Completion of theory and methods requirements and senior standing in the sociology major.

A capstone course designed to integrate sociological theory and methods and to guide students in the conduct of social research.

4993 Honors Thesis

3 hours credit. Prerequisite: Enrollment limited to candidates for honors in sociology during their last two semesters; completion of honors examination and approval by the Honors Program coordinator.

Supervised research and preparation of an honors thesis. May be repeated once with advisor's approval.

COURSE DESCRIPTIONS
SOCIAL SCIENCE
(SSC)

3013 Conceptualization and Measurement in Social Research

(3-0) 3 hours credit. Prerequisite: general education math requirement.

Introduction to conceptualization, operationalization and measurement in the social sciences; use of elementary measures of central tendency and dispersion, crosstabulation, and linear model procedures to evaluate relationships among variables; problems of description and inference. May also include use of standard computer packages and secondary analysis of data.

3023 Social Research Design and Applications

(3-0) 3 hours credit. Prerequisite: SSC 3013 or its equivalent.

Introduction to the philosophy of science and the logic of major types of research designs, including field, experimental and survey projects. Methods of data gathering, analysis and reporting applied to research on policy-relevant problems in the social sciences.

3103 Major Theories of the Social Sciences

(3-0) 3 hours credit.

A survey of major theories and types of theories in nineteenth and twentieth century social science. Particular attention is paid to the origin of distinctions among the social science and to competing visions of the connections between them.

3113 The Contemporary City

(3-0) 3 hours credit.

An introduction to urban America from a multidisciplinary perspective. Attention to the economic, social, political and environmental factors which have produced the physical form and institutional arrangements of the contemporary city. Problems and opportunities currently facing American cities. (Formerly URB 3523; credit cannot be earned for both SSC 3113 and URB 3523.)

3123 Urban Environmental Values

(3-0) 3 hours credit.

This course will be an interdisciplinary inquiry into how environmental perceptions are formed. The influence of human values on the quality of both the natural and the built environments will be explored in detail. Special emphasis will be given to a comparative analysis of sometimes conflicting values represented by differing cultures, disciplines and frames of reference and the role they play in the formulation of public policy. (Formerly URB 3103; credit cannot be earned for both SSC 3123 and URB 3103.)

3153 Women in American Society

(3-0) 3 hours credit.

Examines aspects of women's experience in contemporary American society. Topics may include labor-force participation and economic decision-making, political and religious status, gender role socialization, family organization and the feminist and anti-feminist movements. When possible, cross-cultural and historical comparisons will be introduced. Topics and approaches will vary.

✓ **3203 Violence and Society**

(3-0) 3 hours credit.

This course examines the major theories which attempt to explain why violence occurs in society. Certain forms of violence, both legal and illegal, are studied from a variety of perspectives in the social sciences to determine whether present explanations of violent behavior are adequate.

3253 Race, Ethnicity, and Public Policy

(3-0) 3 hours credit.

An examination of the historical and societal causes of economic deprivation among American Indians, Blacks, and Hispanics, with special attention devoted to social, political, and economic strategies for the elimination of minority poverty in the United States.

3303 Economy and Polity

(3-0) 3 hours credit.

The political, legal and ethical context of modern commercial society is explored through the evolution of conceptions of the economy, the individual and the state. Topics may include the ethical and legal impact of business practices, normative implications of the interaction of modern government and economic activity, the impact of markets on concepts of public and private life.

3533 Inter-American Relations

(3-0) 3 hours credit.

The development of political, economic, and cultural relations among nations of the Americas. (Formerly HIS 3533. Credit cannot be earned for both HIS 3533 and SSC 3533.)

4223 Research Applications in the Social Sciences

(3-0) 3 hours credit. Prerequisite: SSC 3013 or equivalent.

Provides students the opportunity to apply research and quantitative techniques as analytical tools in the social and policy sciences.

4343 Transitions to Democracy

(3-0) 3 hours credit.

An empirical and theoretical analysis of transitions from authoritarian to democratic political systems. Topics will include political order, reform, and change. Specific examples may be drawn from Africa, Asia, Latin America, Western Europe, or North America.

4353 Leadership and Elites

(3-0) 3 hours credit.

A survey of the major theoretical and empirical approaches to the study of elites and leadership. Political, sociological, psychological, and historical perspectives are examined. (Formerly POL 4353; credit cannot be earned for both POL 4353 and SSC 4353.)

4373 Program Evaluation

(3-0) 3 hours credit. Prerequisite: SSC 3013 or equivalent, or consent of instructor.

Theoretical and applied perspectives on the evaluation of social change programs. Focus on the problems involved in designing, implementing, and evaluating community-based intervention.

4951-3 Special Studies in Social Sciences

1-3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies courses may be repeated for credit when the topics vary, but not more than 6 hours regardless of discipline, will apply to a bachelor's degree.

RESERVE OFFICER TRAINING CORPS PROGRAM

Air Force R.O.T.C. Students at The University of Texas at San Antonio may enroll in courses that are required to become a commissioned officer in the U.S. Air Force. The Air Force Reserve Officer Training Corps (R.O.T.C.) is voluntary and open to all qualified students, male and female. All courses are held on The University of Texas at San Antonio campus.

Trinity University students can enroll in Air Force ROTC at The University of Texas at San Antonio. Those Trinity students will attend classes on campus at The University of Texas at San Antonio.

Army R.O.T.C. A student enrolling at The University of Texas at San Antonio may pursue courses in Military Science designed to provide the opportunity to develop the knowledge and skills required for a commission as an officer in the U.S. Army. The Reserve Officer Training Corps (R.O.T.C.) is open to all qualified students (male and female) on a voluntary basis at both The University of Texas at San Antonio and The University of Texas Health Science Center. All courses for those enrolled in the program are held on The University of Texas at San Antonio campus.

AIR FORCE RESERVE OFFICER TRAINING CORPS PROGRAM

To obtain a commission as an officer in the U.S. Air Force, a baccalaureate degree in one of the disciplines offered by The University of Texas at San Antonio and completion of either the *Four-Year Program* or the *Two-Year Program* in Aerospace Studies is required. Credit for aerospace studies courses may be applied toward a baccalaureate degree *only as free electives*. With respect to the free electives specified in the degree requirements for each major, there is a maximum number of hours of aerospace studies that may be applied to the free electives allowed.

Credit for aerospace studies courses, when awarded by another accredited college or university, is accepted by The University of Texas at San Antonio as free elective credit within the same limitations as aerospace studies credit earned at The University.

Two routes to an Air Force Commission are available in Air Force ROTC at The University of Texas at San Antonio. Entering students may enroll in the *Four-Year Program*, and students with at least two academic years remaining in college may apply for the *Two-Year Program*.

The *Four-Year Program* does not require a formal application for admission. Any student wishing to participate in the freshman and sophomore level courses of Air Force ROTC may enroll for these classes at the same time and in the same manner as for other University of Texas at San Antonio courses. The freshman and sophomore courses comprise the General Military Course (GMC). Membership as a cadet in the GMC does not confer any military status or commitment upon the student. During the GMC, students can compete for admission to the Professional Officer Course, which is described below. Cadets in the *Four-Year Program* attend a paid four-week field training course.

The *Two-Year Program* consists of the Professional Officer Course (POC), the last two years of the *Four-Year Program*. Acceptance into the *Two-Year Program* is based upon competitive standards, and students must be accepted by the Air Force prior to registration for classes. Since the processing for admission into the *Two-Year Program* must be completed well in advance of enrollment, students interested in the program should apply in the Fall Semester preceding the academic year in which they intend to enter the program. Application can be made in person or in writing to the Professor of Aerospace Studies. All students entering the *Two-Year Program* must first complete a paid six-weeks field training program.

All students in the Air Force ROTC are issued books and uniforms for use in the ROTC classes. In addition, all POC students enlist in the Air Force Reserve and receive a monthly subsistence allowance.

A required Leadership Laboratory is conducted in conjunction with all Aerospace Studies courses. Leadership Laboratory offers students the opportunity to learn and practice the skills and techniques required to be an Air Force officer within a realistic Air Force organizational framework. It also provides the cadets with opportunities to learn about the actual conduct of Air Force missions and operations through guest lectures and field trips.

Cadets may apply for Air Force ROTC Scholarships. These scholarships are available in lengths of 3½, 3, 2½, and 2 years, and pay tuition, fees, books and a monthly subsistence allowance for the duration of the scholarship. All eligible students in the GMC may apply for these scholarships. Scholarships are awarded competitively, based on academic merit and the career field the cadet is qualified for. *Two-Year Program* applicants may apply for two-year scholarships the summer prior to entry into the POC.

COURSE DESCRIPTIONS AEROSPACE STUDIES (ASC)

1031 General Military Course I

(1-1) 1 hour credit.

A study of the doctrine, mission and organization of the United States Air Force; United States strategic offensive and defensive forces; their missions and functions; employment of nuclear forces.

1041 General Military Course II

(1-1) 1 hour credit.

Aerospace defense; missile defense; United States general purpose forces and Aerospace support forces; the mission, resources, and operations of the tactical air forces with special attention to limited war; review of Army, Navy, and Marine general purpose forces.

2031 General Military Course III

(1-1) 1 hour credit.

This course examines the development and growth of air power from a historical perspective starting before the first powered flights, continuing through World War I, the interwar years, and World War II. It traces development of the various concepts for employment of air power and focuses upon factors which prompted research and technological change.

2041 General Military Course IV

(1-1) 1 hour credit.

A continuation of 2031, beginning with the development of air power from World War II to the present. Various events and trends in the history of air power are examined, especially where these provide significant examples of the impact of air power on strategic thought. Contemporary defense strategy, concepts, and doctrine are emphasized.

3013 The Professional Officer Course I

(3-1) 3 hours credit.

A seminar course which examines management principles, functions, tools and problem solving. Throughout the course, students will learn and practice communication skills necessary as future junior officers in the United States Air Force.

3023 The Professional Office Course II

(3-1) 3 hours credit.

A seminar course pertaining to professionalism and leadership as applicable to the junior officer. Includes the meaning of professionalism and professional responsibilities. Includes study and practice in the use of Air Force communicative skills.

4013 The Professional Officer Course III

(3-1) 3 hours credit.

A study of the military justice system and the role and function of the professional military officer in a democratic society. Includes examination of American defense policy formulation and implementation. Students are provided the opportunity to learn and practice communication skills necessary as future junior officers in the U.S. Air Force.

4023 The Professional Officer Course IV

(3-1) 3 hours credit.

Continuation of 4013, with an extensive analysis of various dynamics involved in defense policymaking. Examination of various institutional agencies in light of their specific interests in defense policy. Case studies involving weapons acquisition programs, technological innovation, doctrinal imperatives, and political factors.

ARMY RESERVE OFFICER TRAINING CORPS PROGRAM

To obtain a commission as an officer in the U.S. Army, students must complete either the *Four-Year Program* or the *Two-Year Program* in Military Science and be a full-time student pursuing a baccalaureate degree in one of the disciplines offered by The University of Texas at San Antonio. Students who complete their Military Science program prior to receiving their baccalaureate degree receive their commissions under the *Early Commissioning Program* and remain in the Army Reserve while completing their degree requirements.

Credit for military science courses may be applied toward a baccalaureate degree *only as free electives*. With respect to the free electives specified in the degree requirements for each major, there is a maximum number of hours of military science that may be applied to the free electives allowed. Credit for military science courses, when awarded by another accredited college or university, is accepted by The University of Texas at San Antonio as free elective credit within the same limitations as military science credit earned at The University.

The *Four-Year Program* consists of 18 semester hours of military science courses and is offered in two parts: a *Basic Course* and an *Advanced Course*. A formal application is not required for students entering the Four-Year Program. Registration is accomplished at the same time and the same manner as for other university courses. The Basic Course, consisting of 6 semester hours of course work, is normally taken during the freshman and sophomore years. Enrollment in the Basic Course does not confer any military status or commitment upon the student. Students who successfully complete the Basic Course are eligible for entry into the Advanced Course.

The Basic Course requirements may be compressed into one academic year. The Basic Course may be waived without credit for students with prior military service and/or junior ROTC.

Students who desire enrollment in the Advanced Course but have not completed the Basic Course may attend a six-week paid summer camp.

The Advanced Course, outlined below in the Two-Year Program, consists of 12 semester hours of course work and is normally taken during the junior and senior years at The University.

The *Two-Year Program* consists of the Advanced Course, the last two years of the Four-Year Program. Students must have two academic years remaining at either the undergraduate or graduate level (or a combination of both) and satisfy the Basic Course requirements through any of the options listed above in the discussion of the Four-Year Program.

Upon entering the Advanced Course, a student is required to sign a contract which obligates him or her to complete the ROTC program and serve a tour of duty as a commissioned officer in the United States Army or Army Reserve. Students enrolled in

272 / Army Reserve Officer Training Corps Program Military Science

the Advanced Course receive a subsistence allowance and are eligible to receive additional pay as an "officer trainee" with a local Reserve or National Guard as a participant in the *Simultaneous Membership Program*.

Students in the Advanced Course attend a paid six-week summer camp between their junior and senior years.

The Army ROTC program offers competitive scholarships for up to three years to selected students. These scholarships provide for tuition, fees, and a subsistence allowance.

Participation in a leadership laboratory is required in conjunction with all courses. The laboratory provides the opportunity to acquire leadership skills and experiences that will enhance a student's ability to perform as an Army Officer.

Individuals enrolled in all ROTC classes will be required to participate in physical fitness training and to take the Army Physical Readiness Test each semester.

Students enrolled in Army ROTC courses are furnished, free of charge, complete uniforms, texts, and necessary equipment.

The program requirements for the Basic and Advanced Courses are as follows:

Basic	Advanced
MSC 1011	MSC 3013
MSC 1021	MSC 3023
MSC 2012	MSC 4013
MSC 2022	MSC 4023

COURSE DESCRIPTIONS **MILITARY SCIENCE** **(MSC)**

1011 Fundamentals of Leadership and Management I

(1-2) 1 hour credit.

Organization of the Army and ROTC. Discussion of career opportunities for ROTC graduates and the military as a profession. Customs and traditions of the service. Development of leadership potential.

1021 Fundamentals of Leadership and Management II

(1-2) 1 hour credit.

Leadership case studies of problems facing junior leaders in today's Army in non-combat situations. Evaluation of weapons and warfare using the principles of warfare as a catalyst. Effects of technological and sociological change on the military. Continuation of customs and traditions of the service. Development of leadership potential.

2012 Applied Leadership and Management I

(2-2) 2 hours credit.

Instruction in land navigation utilizing a map and compass, conduct of drill and ceremonies, and administration of basic first aid to include performance of cardiopulmonary resuscitation (CPR).

2022 Applied Leadership and Management II

(2-2) 2 hours credit.

Military geography and the use of maps. Continuation of the operation of basic military teams to include the principles of offensive and defensive combat and the functions and responsibilities of the junior leader. Development of leadership potential through practical exercises.

3013 Advanced Leadership and Management I

(3-2) 3 hours credit. Prerequisites: MSC 1011, 1021, 2012, and 2022, or consent of instructor.

Performance-oriented instruction in preparation for Advanced Camp. Analysis of psychological, physiological, and sociological factors which affect human behavior. Analysis of

leadership and management processes. Techniques in planning, presenting and evaluating performance-oriented instruction.

3023 Advanced Leadership and Management II

(3-2) 3 hours credit. Prerequisite: MSC 3013 or consent of instructor.

Performance-oriented instruction in preparation for Advanced Camp. Development of the leader's ability to express himself, analyze military problems, and prepare and deliver logical solutions. Analysis of the leader's role in planning, directing, and coordinating the efforts of individuals and small units in the execution of offensive and defensive tactical missions.

4013 Seminar in Leadership and Management of the Military Team

(3-2) 3 hours credit. Prerequisite: MSC 3023 or consent of instructor.

Analysis of selected leadership and management problems. Responsibilities of the Commander and staff in areas of personnel, intelligence, operations, and logistics. Administration of military law. The interrelationships of the military team.

4023 Seminar in Leadership and Management

(3-2) 3 hours credit. Prerequisite: MSC 4013 or consent of instructor.

Analysis of selected leadership and management problems. Responsibilities of the Commander in the management of personnel, account, logistics, operations, maintenance, and unit readiness. Seminars in the role of the officer in the conduct of personal affairs.

UNIVERSITY HONORS PROGRAM

COURSE DESCRIPTIONS

HONORS (HON)

3113 Honors Seminar

(3-0) 3 hours credit. Prerequisite: Enrollment in The University Honors Program.

Interdisciplinary seminar, team-taught by faculty from different academic areas, that explores broad topics. May be repeated when the topics vary.

4993 Honors Research

(3-0) 3 hours credit. Prerequisite: Enrollment in The University Honors Program.

Supervised research. May be repeated with the supervisor's approval.

Appendix A.

PREPROFESSIONAL COURSES OF STUDY IN LAW AND THE HEALTH FIELDS

The University of Texas at San Antonio does not offer specific prelaw, premedical, pre-dental or pre-nursing programs; rather, students select courses of study in preparation for admission to law, medical, dental, and nursing schools in terms of individual preferences and in terms of specific program requirements of individual professional schools.

The semester hour and grade requirements set forth below are *minimum* requirements, and satisfactory completion of these requirements does not assure admission to any such professional schools, since applications for admission far exceed spaces available.

Preparation for law school. Most law schools do not recommend or encourage students to concentrate in a particular area or discipline, although they do recommend that students acquire certain skills during their undergraduate career. Since these vary from school to school, students should be familiar with the requirements and preferences of the particular school or schools to which they intend to apply. That information can be obtained from the collection of current catalogs and directories for law schools in Texas and throughout the United States available through UT San Antonio's Prelaw Advisory Committee. Information on the procedures for admission to law schools and the Law School Admission Test (LSAT) is also available from the committee. Appointments to consult with members of the committee may be made through the Office of the Division of Social and Policy Sciences or the Division of Behavioral and Cultural Sciences.

Preparation for Medical and Dental Schools. In general, medical and dental school admission committees do not state a preference about an undergraduate major field, leaving the student free to choose, after conferences with his or her advisor, a degree program suited to the student's special abilities and interests. The vast majority of entrants have four years of college with a bachelor's degree. A few students with outstanding records and a high degree of maturity are admitted to medical school after completing 90 semester hours and to dental schools after completing 60 semester hours.

Admission requirements for The University of Texas Medical and Dental Schools are representative of admission requirements for most other American schools. These requirements include: one year of college English; two years of biology as required for college science majors (one year must include laboratory work); one year of physics as required for college science majors, including laboratory; one year of general chemistry and one year of organic chemistry as required for college science majors, including the corresponding laboratories; one-half year of college calculus (not required for dental school).

Each applicant is required to take the Medical College Admission Test or the Dental Admission Test. The preferred time to take these tests is at the spring test date prior to late summer or fall application for admission.

Students are encouraged to consult with the Chairman, Health Professions Advisory Committee, Division of Life Sciences early in their college career for advisement and for information concerning professional school requirements. The committee chairman also should be consulted concerning the written evaluation which must be submitted for each applicant.

Applications for all University of Texas System Medical and Dental Schools are processed by the Medical and Dental Application Centers, 201 West Seventh Street, Suite 712, Austin, Texas 78701.

Preparation for nursing school. Admission requirements for The University of Texas Schools of Nursing are representative of admission requirements for most other American nursing schools. A minimum of 6 semester hours is required, including six semester hours of college English, nine hours in behavioral sciences, twelve hours in history and government, three hours in statistics, and eighteen hours in natural sciences, which must include chemistry, anatomy, physiology, microbiology, and nutrition.

Additional information and advisement may be obtained from the Chairman, Health Professions Advisory Committee, Division of Life Sciences.

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INFORMATION DIRECTORY

Requests for information should be directed to the offices shown below. The University's address is: The University of Texas at San Antonio, San Antonio, Texas, 78285. The main telephone number of UT San Antonio is (512) 691-4011.

Academic Advisement

Declared majors College Deans
 Undeclared majors..... Director of Student Services

Academic Degree Programs

and Courses College Deans

Admission

Undergraduate and Graduate Director of Admissions

Career Planning Director of Career Planning
 and Placement Center

Changes in Enrollment..... Registrar

Continuing Education..... College Deans

Credit by Examination..... Testing Center

Degree Application..... Registrar

Financial Aid, Loans, or

Scholarships Director of Student Financial Aid

Financial Matters Business Manager

General Information..... Director of Admissions

Handicapped Students..... Director of Student Services

Health Services..... Student Health Center

International Students..... Director of Student Services

Parking..... University Police

Placement Service

Teacher Director, Office of Teacher
 Certification and Placement

Non-Teacher Director of Career Planning
 and Placement Center

Psychological Counseling..... Director of Counseling Center

Recreational Activities..... Director of Athletics

Refunds..... Business Manager

Registration..... Registrar

Residency..... Registrar

Student Activities..... Director of Student Activities

Student Employment..... Director of Student Financial Aid

Director of Career Planning and Placement Center

Student Services General..... Dean of Students

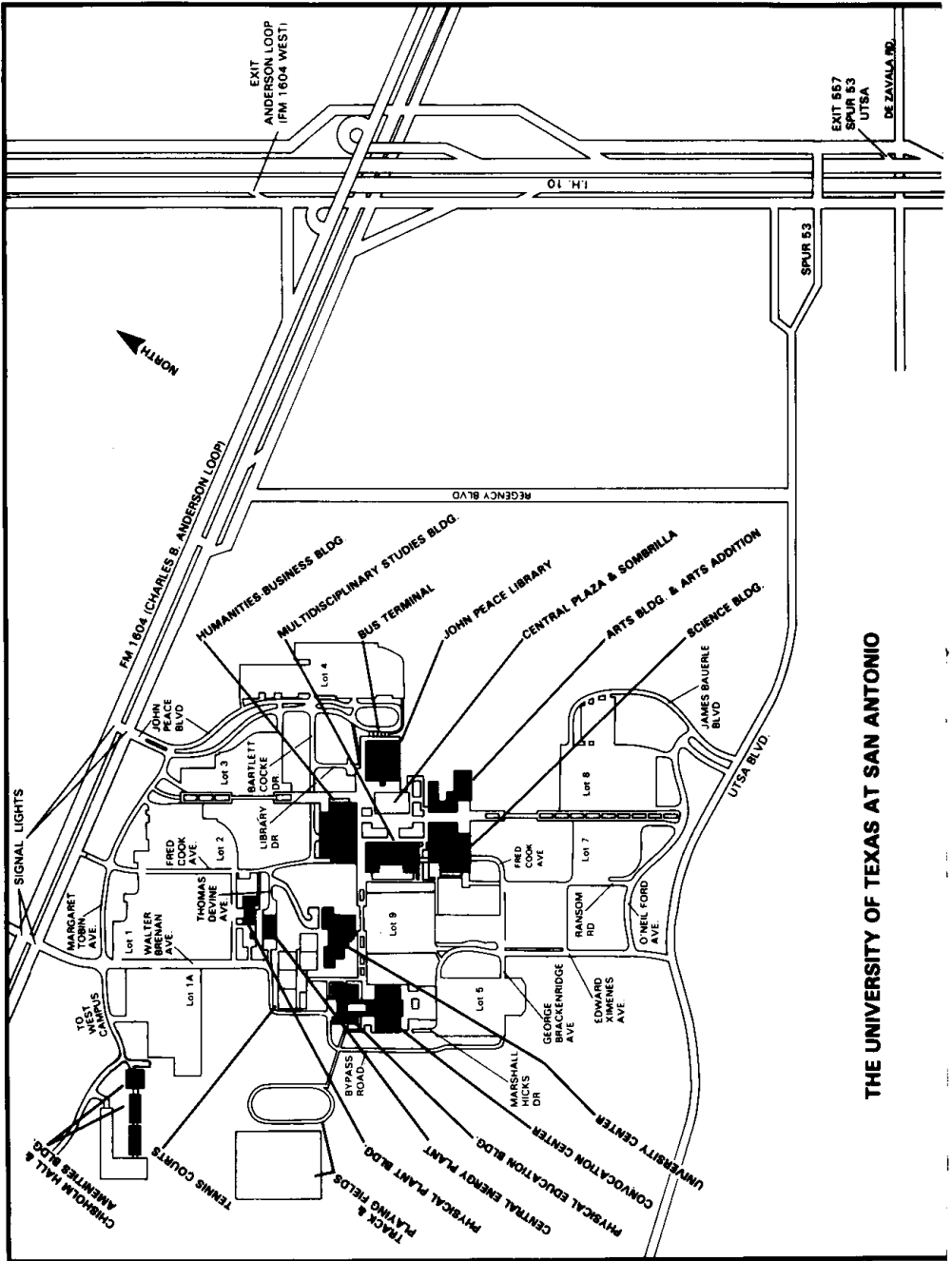
Teacher Certification Program..... Director, Office of Teacher
 Certification and Placement

Transfer of Credit..... Registrar

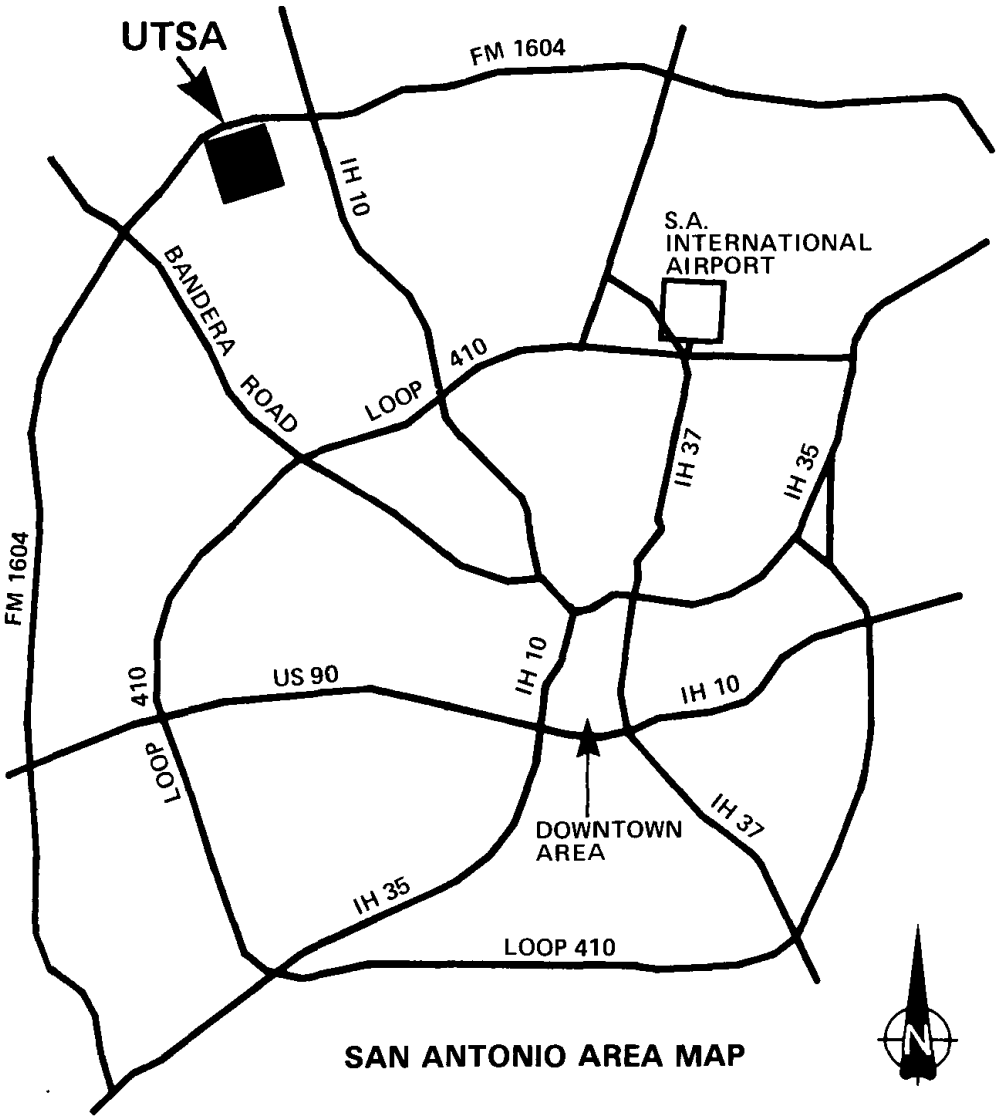
Transcripts..... Registrar

Veterans' Affairs..... Registrar

Withdrawal from University..... Registrar



THE UNIVERSITY OF TEXAS AT SAN ANTONIO



SAN ANTONIO AREA MAP