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The University of Texas at San Antonio reserves the right to withdraw courses at any time and to change fees, tuition, rules, calendar, curriculum, degree programs, degree requirements, graduation procedures, and any other requirement affecting students. The policies, regulations, and procedures stated in this catalog are subject to change without prior notice, and changes become effective whenever the appropriate authorities so determine and may apply to both prospective students and those already enrolled. University policies are required to be consistent with policies adopted by the Board of Regents of The University of Texas System and are in compliance with state and federal laws.

**STUDENTS ARE HELD INDIVIDUALLY RESPONSIBLE FOR MEETING ALL REQUIREMENTS AS DETERMINED BY THE UNIVERSITY OF TEXAS AT SAN ANTONIO AND THE UNIVERSITY OF TEXAS SYSTEM. FAILURE TO READ AND COMPLY WITH POLICIES, REGULATIONS, AND PROCEDURES WILL NOT EXEMPT A STUDENT FROM WHATEVER PENALTIES HE OR SHE MAY INCUR.**

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**Academic structure:** The University of Texas at San Antonio has recently made changes in its academic structure. This catalog reflects the structure for the academic year 2002-2003. Effective Fall 2002, UTSA has seven colleges and one school: College of Business, College of Education and Human Development, College of Engineering, College of Liberal and Fine Arts, College of Public Policy, College of Sciences, Honors College and School of Architecture. Beginning with the Fall 2001 semester, the University adopted a departmental structure founded upon the principle of discipline-based academic units. For a current listing of colleges, departments, and disciplines, please refer to the UTSA Information bulletin.

**University publications:** The UTSA Undergraduate Catalog provides information about degrees offered by the undergraduate departments and lists the faculty. The chapter for each college describes the degree requirements for all majors offered by the college and lists the college's undergraduate courses. UTSA Information gives important information about academic policies and procedures that apply to all students, regardless of the catalog under which they are seeking their degree. It includes the official academic calendar, admission procedures, and residence requirements. The bulletin contains policies on grades and the grade point average, credit by examination, and scholastic probation and dismissal. This publication also gives historical and current information about the University's organization and physical facilities.

**Advising:** UTSA views sound academic advising as a significant responsibility in educating its students. Students are encouraged to seek academic advising prior to selecting a specific major to ensure that they complete degree requirements in an appropriate and timely manner. Prospective students can seek information about UTSA academic programs from UTSA's Visitor Center or the colleges in which the degree programs are located. New students with fewer than 30 credit hours and undeclared majors with fewer than 45 hours should go to the Tomás Rivera Center for advising. Other students should go to the advising center of the college housing the degree program in which they are interested.
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BACHELOR'S DEGREE REGULATIONS

DEGREE REQUIREMENTS

Overall Requirements

In order to receive a bachelor’s degree from UTSA, a student must meet these minimum requirements:

1. Complete a minimum of 120 semester credit hours, at least 39 of which must be upper-division level.
2. Complete the University Core Curriculum requirements outlined in this chapter.
3. Complete the major and support work requirements and the free elective requirements for the desired degree. Free electives refer to any semester credit hours accepted by UTSA in transfer or awarded by UTSA that, for degree purposes, are not applied to Core Curriculum, major, minor, or support work requirements. The only restrictions placed upon courses used as free electives are as follows:
   a. that a specific number of free elective credits must be at the upper-division level for some degree programs
   b. that a maximum of 6 semester credit hours of physical activities courses can be applied to the free electives allowed for any UTSA degree program
   c. that a maximum of 9 semester credit hours of military science can be applied to the free electives allowed for any UTSA degree program.
4. Meet all requirements for a degree as put forth by the Texas State Education Code, including the following:
   a. All students must complete 6 semester credit hours of American or Texas history.
   b. All students must complete 6 semester credit hours of government or political science, including the Constitution of the United States and constitutions of states, with special emphasis on Texas.
5. Meet the minimum UTSA residence requirements.
6. Achieve an overall 2.0 grade point average in all work attempted at UTSA and a 2.0 grade point average in all work included in the major.
7. Be in good academic standing at UTSA.
8. Apply formally for the degree before the deadline in the Office of the Registrar and pay the required fee.

Minimum UTSA Residence Requirements

The following minimum UTSA residence requirements 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 25 percent of the total number of semester credit hours required for a bachelor’s degree must be completed at UTSA before a degree can be conferred.
2. Twenty-four of the last 30 semester credit hours applied to the degree program must be completed in residence, with the exception that among University of Texas System components, a student may, with the approval of the appropriate dean, transfer additional coursework to the program at the degree-granting institution.
3. Of the minimum 39 upper-division semester credit hours required in all degree programs, 18 must be earned in UTSA courses.
4. At least 6 semester credit hours of upper-division coursework in the major must be completed at UTSA. Additional hours in the major sequence may be required under individual UTSA degree plans.

Core Curriculum

The Core Curriculum is the part of each student’s degree program in which he or she takes courses that meet requirements common to all UTSA undergraduates. Candidates for a bachelor’s degree must achieve core objectives by completing the Core Curriculum.
Transfer of Core Curriculum Courses

In accordance with the Texas Education Code, Chapter 61, Subchapter S, the UTSA Core Curriculum consists of 42 semester credit hours of coursework. If a student successfully completes the entire core curriculum at another public institution of higher education in Texas, that block of courses may be transferred to any other public institution of higher education in Texas and must be substituted for the receiving institution’s core curriculum. Students will receive academic credit for each of the courses transferred and may not be required to take additional core curriculum courses at the receiving institution unless the Texas Higher Education Coordinating Board has approved a larger core curriculum at that institution.

Students who have completed a portion of the Core Curriculum at another Texas public institution of higher education may use that coursework to satisfy UTSA Core Curriculum requirements if:

- the course is designated as meeting a Core Curriculum requirement at the institution, and
- the course fits within a UTSA Core Curriculum Domain.

For transfer purposes, the designated TCCN courses will be accepted in transfer in lieu of these courses.

Students should consult with an academic advisor to determine the sequence of courses in the Core Curriculum and the major.

Resolution of Transfer Disputes for Core Curriculum Courses

Public institutions of higher education must follow these procedures in the resolution of credit transfer disputes involving lower-division courses:

1. If an institution of higher education does not accept course credit earned by a student at another institution, the receiving institution will give written notice to the student and to the sending institution that the transfer of course credit is denied. At the request of the sending institution, the receiving institution will also provide written notice of the reasons it denied credit for a particular course or set of courses.
2. A student who receives notice may dispute the denial of credit by contacting a designated official at either the sending or the receiving institution.
3. The two institutions and the student shall attempt to resolve the transfer of the course credit in accordance with Texas Higher Education Coordinating Board rules and guidelines.
4. If the transfer dispute is not resolved to the satisfaction of the student or the sending institution within 45 days after the date the student received written notice of denial, the institution that denied the course credit for transfer will notify the Commissioner of Higher Education of its denial and the reasons for the denial.
5. The commissioner or the commissioner’s designee will make the final determination about the transfer of course credit and give written notice of the determination to the involved student and institutions.

The Texas Higher Education Coordinating Board will collect data on the types of transfer disputes and the disposition of each case the commissioner considers.

If a receiving institution believes that a course which a student presents for transfer is not of acceptable quality, it should first contact the sending institution and try to resolve the problem. If the two institutions cannot come to a satisfactory resolution, the receiving institution may notify the Commissioner of Higher Education, who may investigate the course. If its quality is found to be unacceptable, the Texas Higher Education Coordinating Board may discontinue funding for the course.

Goals of the Core Curriculum

The Core Curriculum reflects the educational goals of the University. It is designed to enable students to assess the perspectives and accomplishments of the past and to move to the future with an informed and flexible outlook. It promotes intellectual adaptability, ethical awareness, and transfer among diverse modes of thought.
An essential aim of the Core Curriculum is to cultivate the verbal, numerical, and visual skills necessary to analyze and synthesize information, construct arguments, and identify and solve problems. Another essential aim is to foster understanding of the intellectual and cultural pluralism of modern society as it is reflected in natural science and mathematics; behavioral, cultural, and social science; and literature and artistic expression. By encouraging interdisciplinary study, the Core Curriculum seeks to develop critical awareness of the continuities and discontinuities of human thought, history, and culture, thus helping prepare students to meet the demands of change.

The University reviews Core courses for their success in promoting the goals of the Core, and it encourages students to select Core courses that will best achieve these goals. Beyond the Core, each student must fulfill the requirements of a major.

**Expectations for Entering Students**

The Core Curriculum is built on the assumption that the foundations of the general part of a student's education are laid in secondary school. Appropriate levels of proficiency in important subjects have been established as prerequisites for many of the courses in the Core, especially in the areas of rhetoric, mathematics, and language. Students who are unable to demonstrate proficiency may be required to take additional coursework before qualifying to take courses that meet Core Curriculum requirements. Entering students are also expected to possess proficiency in reading, knowledge of research and library tools, and a familiarity with basic computer skills. Students unable to demonstrate such proficiency and knowledge may be required to enroll in noncredit programs developed by UTSA to correct deficiencies in these areas.

**Core Curriculum Requirements**

**Rhetoric** (6 semester credit hours)

To achieve the objectives of the rhetoric segment, students must demonstrate competent writing in English; critical proficiency in oral and graphic communication; competence in constructing valid arguments and criticizing arguments; and critical proficiency in using diverse theoretical perspectives to identify and formulate problems and draw conclusions.

Students must complete the following courses, for a total of 6 semester credit hours:

- ENG 1013 Freshman Composition
- ENG 1023 Discourse across the Disciplines

**Domain I: Mathematics and Science** (9 semester credit hours)

To achieve the objectives of Domain I, students must demonstrate knowledge of higher mathematics sufficient to understand the basis of mathematical reasoning, and knowledge of the methods, intellectual approaches, social significance, and history of the physical and natural sciences.

Students will normally complete the requirements for Domain I in 9 semester credit hours of coursework.

A. **Mathematics** (3 semester credit hours). Students must complete one course from the following:

- MAT 1023 College Algebra with Applications
- MAT 1033 Algebra with Calculus for Business
- MAT 1043 Introduction to Mathematics
- MAT 1073 Algebra for Scientists and Engineers
- STA 1043 Introduction to Statistical Reasoning
- STA 1053 Basic Statistics

or another mathematics or statistics course at an equivalent or more advanced level
B. **Science** (6 semester credit hours). Students must complete two courses from the following lists. At least one course must be chosen from Level Two. Level Two science courses are more rigorous than those in Level One.

**Level One**
- ANT 2033 Introduction to Physical Anthropology
- ANT 2043 Introduction to Archaeology
- BIO 1113 Biology I
- CHE 1073 Basic Chemistry
- ES 2013 Introduction to Environmental Systems
- GEO 1013 The Third Planet
- PHY 2004 Understanding Physics

**Level Two**
- AST 1013 Introduction to Astronomy
- AST 1033 Exploration of the Solar System
- BIO 1123 Biology II
- BIO 1143 Biology III
- CHE 1103 General Chemistry I
- CHE 1303 General Chemistry II
- GEO 1103 Introduction to Earth Systems
- GEO 1123 Earth History
- GRG 2613 Physical Geography
- PHY 1013 Universes
- PHY 1603 General Physics I
- PHY 1623 General Physics II
- PHY 1904 Technical Physics I
- PHY 1924 Technical Physics II

**Domain II: Society and Culture** (18 semester credit hours)

To achieve the objectives of Domain II, students must demonstrate critical understanding of the political and economic dimensions of social life; knowledge of U.S. history sufficient for understanding current developments in American society within a historical context; substantial knowledge of social, racial, cultural, and gender diversity in the United States and Texas; and knowledge of the history, theory, methods, and intellectual approaches of the social and behavioral sciences, including similarities and differences with respect to one another and to other modes of understanding.

Students normally fulfill the requirements of Domain II in 18 semester credit hours of coursework.

A. **United States History and Diversity** (6 semester credit hours). Each student must complete two of the following courses for a total of 6 semester credit hours. In meeting this requirement, students fulfill the statutory requirement in United States or Texas history.

- HIS 1043 United States History: Pre-Columbus to Civil War Era
- HIS 1053 United States History: Civil War Era to Present
- HIS 2053 Texas History

B. **Political Studies** (6 semester credit hours). By taking POL 1013 and POL 1213 or POL 1013 and POL 1133, students will fulfill the statutory requirement in United States and Texas government.

- POL 1013 Introduction to American Politics
- POL 1133 Texas Politics and Society
- POL 1213 Topics in Texas and American Politics
Note: Students who have passed the Advanced Placement (AP) examination in American Government (with a score of 3 or better) will receive 3 semester credit hours of AP credit in American government, equivalent to POL 1013, Introduction to American Politics. Students may request that this examination be used to satisfy 3 hours of the UTSA six-hour Core Curriculum requirement in Political Studies, after they have completed POL 1133, Texas Politics and Society.

Students who pass the College Level Examination Program (CLEP) examination in American Government will receive 3 hours of credit in American government, equivalent to POL 1013, Introduction to American Politics. Students may request that this examination be used to satisfy 3 hours of the UTSA six-hour Core Curriculum requirement in Political Studies, after these students have completed POL 1133, Texas Politics and Society.

C. Social and Behavioral Sciences (3 semester credit hours). Students must complete one of the following courses:

AMS 2013 Basic Issues in American Culture
ANT 1013 Introduction to Anthropology (formerly Human Adaptation)
BBL 2003 Language, Culture, and Society
BBL 2033 Multiculturalism in the Southwest
COR 1203 Freshman Seminar
CRJ 1113 The American Criminal Justice System
CRJ 2813 Introduction to Courts and the Legal System
GRG 1013 Fundamentals of Geography
GRG 2623 Human Geography
IDS 2113 Society and Social Issues
PSY 1013 Introduction to Psychology
PSY 1513 Knowledge and Learning
SOC 1013 Introduction to the Study of Society
SOC 2013 Social Problems

D. Economics (3 semester credit hours). Students must complete one of the following courses:

ECO 2003 Introduction to Political Economy
ECO 2013 Introductory Macroeconomics
ECO 2023 Introductory Microeconomics

Domain III: Literature and the Arts (6 semester credit hours)

To achieve the objectives of Domain III, students should demonstrate an understanding of the conceptual approaches and history of at least one of the arts, as a means of comprehending the aesthetic patterns that underlie human creativity; and an understanding of literary concepts and contemporary trends in interpretation, as a means of comprehending the metaphoric or analogical potential of human language.

A. Literature (3 semester credit hours). Students must complete one of the following courses:

CLA 2033 Introduction to Classical Literature
CLA 2323 Classical Mythology
CSH 1103 Literary Masterpieces of Western Culture I
CSH 1113 Literary Masterpieces of Western Culture II
CSH 2313 Introduction to Literary Studies
ENG 2013 Introduction to Literature
ENG 2213 Literary Criticism and Analysis
FRN 2333 French Literature in English Translation
GER 2333 German Literature in English Translation
IDS 2303 World Literature I: Through the Sixteenth Century
IDS 2313 World Literature II: Since the Sixteenth Century
ITL 2333 Italian Literature in English Translation
RUS 2333 Russian Literature in English Translation
SPN 2333 Hispanic Literature in English Translation
B. The Arts (3 semester credit hours). Students must complete one of the following courses:

- AHC 1033 Masterworks in Art
- AHC 1113 Survey of Art and Architecture from Prehistoric Times to 1350
- AHC 1123 Survey of Art and Architecture in Europe and the New World from 1350 to 1750
- AHC 1133 Survey of Modern Art
- ARC 2413 History of Architecture I
- ARC 2423 History of Architecture II
- ART 1153 Painting for Non-Art Majors
- ART 1163 Drawing for Non-Art Majors
- ART 1173 Photography for Non-Art Majors
- BBL 2023 Latino Cultural Expressions
- MUS 2623 Basic Elements of Music for the Non-Music Major
- MUS 2663 History and Styles of Jazz
- MUS 2673 History and Styles of Rock
- MUS 2683 Masterpieces of Music

Domain IV: Interdisciplinary Studies (3 semester credit hours)

To achieve the objectives of Domain IV, students should demonstrate intellectual flexibility, explore the bridges and barriers among various forms of understanding, and understand the nature and limits of different ways of knowing and different academic fields. Students should obtain a broad acquaintance with the cultures of major portions of the world (including non-Western cultures), knowledge of the contexts of international relations, and a knowledge of world geography.

Students will normally fulfill the requirements of Domain IV by completing 3 semester credit hours of coursework.

- ANT 2053 Introduction to Cultural Anthropology
- ANT 2063 Language, Thought, and Culture
- ARC 1413 Architecture and Culture
- ARC 1423 Architecture and Thought
- ASL 2023 American Sign Language: Intermediate II
- BIO 1033 Drugs and Society
- COM 2343 Introduction to Mass Communication
- CS 1023 Cultural Implications of the Information Society
- CSH 1203 Introduction to Hispanic Cultures
- CSH 1213 Topics in World Cultures
- CSH 2113 The Foreign Film
- FRN 2013 Intermediate French I
- FRN 2023 Intermediate French II
- GER 2013 Intermediate German I
- GER 2023 Intermediate German II
- GRG 1023 World Regional Geography
- HIS 2533 Introduction to Latin American Civilization
- HIS 2543 Introduction to Islamic Civilization
- HIS 2553 Introduction to East Asian Civilization
- HIS 2573 Introduction to African Civilization
- HIS 2583 Introduction to South Asian Civilization
- HUM 2093 World Religions
- IDS 2203 World Civilization to the Fifteenth Century
- IDS 2213 World Civilization since the Fifteenth Century
- ITL 1014 Elementary Italian I
- JPN 1014 Elementary Japanese I
- LAT 2113 Intermediate Latin I
- LAT 2123 Intermediate Latin II
MUS 2693 The Music of Latin America
PHI 2123 Moral Issues in Contemporary America
RUS 1014 Elementary Russian I
SPN 2003 Spanish for Elementary Education
SPN 2013 Intermediate Spanish I
SPN 2023 Intermediate Spanish II
SPN 2103 Oral and Written Expression
SPN 2513 Spanish for Special Purposes
SPN 2523 Hispanic Culture and Communication
WGS 2013 Introduction to Women and Gender Studies

Catalog of Graduation

Students have seven years from their term of original registration to complete a degree program under the catalog in effect when they initially registered. A student may choose a subsequent catalog under which to complete graduation requirements, providing the student completed at least one course during a semester in which the selected catalog was in effect with a letter grade other than “W,” “NR,” “F,” or “EP.” The student must complete all degree requirements under the subsequent catalog. Choosing a new catalog begins 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. A student must have an approved catalog at the time an application for graduation is filed.

Multiple Degrees

Pursuing One Degree Covering More Than One Major

A student completing one type of baccalaureate degree at UTSA (i.e., Bachelor of Arts, Bachelor of Science) may elect to concurrently complete other majors of that type. In such cases, only one bachelor’s degree, which includes all majors, is awarded.

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. 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.

Pursuing Two Degrees Concurrently

Students pursuing degrees of different types (i.e., a Bachelor of Arts and a Bachelor of Science) at the same time must satisfy the specific catalog requirements for each degree. Courses common to both degree programs (such as Core Curriculum requirements) may be counted toward the requirements for each degree. Additional courses required in one degree program may be used as free or directed electives in the other degree program.

Pursuing Additional Degrees after Graduation

A student holding a baccalaureate degree from UTSA or another accredited institution may receive an additional bachelor’s degree from UTSA as long as it is in a different major, regardless of the concentration. Such a student continues to be classified as an undergraduate and must:

1. Complete a minimum of 30 semester credit hours of UTSA 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, Core Curriculum requirements, support courses, elective courses, and upper-division courses, as set forth in this catalog.
4. Complete requirements under the catalog in effect at the time of beginning the second degree.
MINORS

UTSA offers formal minors in a variety of disciplines and in several interdisciplinary fields. To receive a minor, students must complete at least 18 semester credit hours, including 6 hours at the upper-division level at UTSA, and must achieve a grade point average of at least 2.0 (on a 4.0 scale) on all work used to satisfy the requirements of a minor. Additional semester credit hours in the minor sequence may be required under individual UTSA degree plans. Students who declare minors must graduate under a catalog that includes minors and must meet any additional requirements listed in that catalog. All requirements for the minor must be met at graduation; a minor cannot be added to a student’s degree program once he or she graduates. Declaration of a minor is voluntary. To declare a minor, a student must file a Change of Major or Degree Information form through the College Advising Center of the desired minor. Students may not formally minor in more than two fields. Descriptions of minor requirements are included in chapters 2-9 of this catalog.

TRANSFERRING COURSES

To prevent unnecessary loss of time and credit, prospective transfer students are encouraged to research as early as possible UTSA’s admission policies and degree requirements in their areas of interest. Questions regarding the transferability of courses should be addressed to the Office of Admissions.

Students attending community colleges should also note the core curricula designed and adopted by the Texas Higher Education Coordinating Board to simplify the transfer of credit. Copies of these core curricula are available through most community college counselors.

Evaluation Procedures

An official evaluation of transfer credit is supplied to each new student as soon as possible at the time of admission. This evaluation shows the equivalency of courses completed elsewhere to courses at UTSA and indicates their applicability to the UTSA Core Curriculum.

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 in these core curricula at various institutions may not be precisely equivalent to courses in the UTSA Undergraduate Catalog, students who have successfully completed the core curricula at other institutions are given full credit toward the appropriate degree at UTSA.

Students who do not receive transfer credit for specific courses should review the policies for credit by examination or contact the Office of Admissions. Grades earned at other institutions are not averaged with grades earned at UTSA to determine a student’s grade point average.

Resolution of Transfer of Credit Disputes

The Texas Higher Education Coordinating Board has established the following procedure for Texas public colleges and universities to follow in resolving transfer of credit disputes for lower-division courses. (The individual courses covered by this procedure are defined by the Coordinating Board’s guides: “Transfer of Credit Policies and Curricula” and “Common Course Numbering System Guide.”)

If a transfer course covered by the Coordinating Board policy is not accepted in transfer to UTSA, the student should contact the Office of Admissions for further explanation. The Office of Admissions, the student, and the sending institution will attempt to resolve the transfer of course credit in accordance with Coordinating Board rules.

If the transfer credit question is not resolved satisfactorily in the opinion of the student or the sending institution within 45 days of notification, the Office of Admissions states the reasons for the course denial to the Commissioner of Higher Education. The commissioner or a designee then provides a final written decision about the transfer course(s) in question to UTSA, the student, and the sending institution.
Course Types and Acceptability

Undergraduate college credits completed at other U.S. institutions are evaluated for transfer to UTSA by the Office of Admissions on the basis of UTSA equivalency tables and according to the guidelines in this section. Generally, all work transferred must be from a college or university accredited by a regional accrediting association (see section below for information about credit from a non-accredited institution).

Credits completed at institutions outside the U.S. must be evaluated on an individual basis, at the student’s expense, by the foreign credentials evaluation service designated by the Office of Admissions. Transfer credit from foreign institutions is accepted by UTSA on the basis of this evaluation.

Generally Accepted

Courses from an Accredited College or University. 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 in this section. Only those hours that apply toward a specific baccalaureate degree program count toward minimum degree requirements.

The applicability of particular courses completed at other institutions toward specific course requirements for a bachelor’s degree at UTSA depends upon equivalency of such courses offered by UTSA. Other academic courses are transferred as electives; credit for these courses counts 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.

All course requirements at UTSA designated as upper-division may be transferred to UTSA 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 upper-division.

If the equivalent of a required upper-division UTSA course is completed at an accredited institution as a lower-division course, the course need not be repeated, but another upper-division course, approved by the student’s advisor, must be completed at UTSA in substitution.

Credit by Examination. Credit by examination awarded at another accredited college or university transfers if the institution equates the results of the examination to a specific course and the course is transferable. Such credit is subject to all other transfer provisions, including the 66-semester-credit-hour transfer limitation from community colleges.

Accepted on a Limited Basis

Physical Activities Courses. Credits earned for physical activities courses can be transferred, within other UTSA transfer provisions, as free elective credit up to a maximum of 6 semester credit hours.

Extension or Correspondence Courses. Credit earned by extension or correspondence through accredited colleges and universities for college-level academic courses is evaluated and accepted for transfer if the course is equivalent to UTSA courses and acceptable to the student’s degree program, and if all other transfer provisions in this section are met. However, the maximum credit accepted through a combination of extension and correspondence courses is 30 semester credit hours (18-semester-credit-hour maximum by correspondence). No more than 6 semester credit hours of correspondence credit may be applied to the major.

Students currently enrolled at UTSA are not normally permitted to take correspondence or extension courses and transfer the credit to UTSA. 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 is about to graduate and cannot obtain the course in residence.

Community College Courses. Transfer credit for community college work may not exceed 66 semester credit hours. Students who have completed more than 66 acceptable semester credit hours may apply specific completed, transferable courses to specific course requirements to avoid having to repeat the courses. The semester credit hours for additional courses may not be applied toward the minimum semester credit hour requirements for a baccalaureate degree.

No upper-division credit may be earned at a community college.
Military Service Training School Courses. As a Serviceman’s Opportunity College (SOC) institution, UTSA awards credit on a limited basis for military coursework. In order for credit to be awarded, a student submits to UTSA an official Army/American Council on Education Registry Transcript System (AARTS) or an official Sailor/Marine/Ace Registry Transcript (SMART) listing all military coursework completed. The Office of Admissions evaluates the transcript and determines the transferability of coursework. Credit is awarded for military coursework that is deemed parallel to academic coursework. Credit is not awarded for military experience based upon a Military Occupational Specialty (MOS) or for coursework that is solely technical in nature. Awarding of credit for military coursework does not guarantee its applicability to a degree at UTSA. A student who has taken military courses that do not transfer may challenge by examination those UTSA courses that appear equivalent to those already completed (see Challenging a UTSA Course in chapter 5, General Academic Regulations, of the UTSA Information bulletin).

Credit for R.O.T.C. or military science, when awarded by another accredited college or university, is accepted by UTSA as free elective credit within the limitations of the student’s degree program (for a maximum of 9 semester credit hours). See individual degree requirements and the R.O.T.C. program requirements in this catalog for limits on military science courses as free electives.

Courses from an Institution Undergoing Accreditation or a Nonaccredited Institution. Credits earned in colleges and universities that are candidates for accreditation may be considered for transfer to UTSA on an individual basis and as applicable to the student’s degree program. Any such credit accepted in transfer must be validated by 30 semester credit hours of coursework in residence at UTSA, with a grade point average of 2.0 or higher in that work.

UTSA reserves the right to refuse recognition of credit from a college or university that is a candidate for accreditation or from a nonaccredited institution.

Not Accepted

Developmental Education, Orientation, Life Experience, High School Level, Below-Algebra Mathematics, or Vocational-Technical Courses. Credits for developmental education, orientation, life experience, high school level, mathematics below the college algebra level, or vocational-technical courses are not acceptable for transfer credit. Where vocational-technical courses support a student’s degree program, the student may make a written request to the Dean of the college to approve those courses as free elective credit. No transfer credit is granted for the General Educational Development (GED) test.

ENROLLMENT IN GRADUATE COURSES

For Undergraduate Credit

An undergraduate student with a cumulative grade point average of 3.0 or higher may enroll in graduate courses and apply the credits earned to an undergraduate degree after obtaining approval from the student’s advisor, the instructor, the Graduate Advisor of Record, and the Dean of the college in which the course is offered. Approval forms are available in the deans’ offices and the Enrollment Services Center. All approvals must be obtained and the form filed by the time of registration. Students are encouraged to begin collecting the appropriate authorizations before the start of the registration period.

For Graduate Credit

An undergraduate student with a cumulative grade point average of 3.0 or higher and lacking no more than 12 semester credit hours for graduation may enroll in a graduate course and earn graduate credit under the following conditions:

1. All hours required for the student’s undergraduate degree must be completed in the term in which the graduate course is being taken.
2. In order to earn graduate credit, the student must graduate at the end of the semester in which the course(s) are taken; otherwise, the course(s) count as undergraduate credit.
3. If graduate credit is earned, the semester credit hours are not considered part of the baccalaureate degree program.

4. The student must obtain permission from the student’s advisor and the dean of the college in which the course(s) to be taken is offered. Approval forms are available in the deans’ offices and the Enrollment Services Center. The form must be filed by the time of registration. Students are encouraged to begin seeking appropriate authorizations before the registration period.

An undergraduate student with a cumulative grade point average of 3.0 or higher and lacking no more than 30 semester credit hours for graduation may enroll in a graduate course and earn graduate credit under the following conditions:

1. The student is in good academic standing in an accelerated bachelor/master’s degree program or is in good academic standing in the Honors College.
2. If graduate credit is earned, the semester credit hours are not considered part of the baccalaureate degree program.
3. The student must obtain permission from the student’s advisor, the instructor, the Graduate Advisor of Record, and the Dean of the college in which the course(s) to be taken is offered. Approval forms are available in the deans’ offices and the Enrollment Services Center. The form must be filed by the time of registration. Students are encouraged to begin seeking appropriate authorizations before the registration period.

GRADUATION

Graduation Dates

Degrees are conferred at the end of each long semester and at the end of the Summer Semester. Public commencement ceremonies are held at the end of the Spring and Fall Semesters. Students who have graduated the previous summer may participate in commencement ceremonies at the close of the Fall Semester. Information on the procedures to be followed is available in the Office of the Registrar. Students may not participate in ceremonies before their actual date of graduation.

Applying for the Degree

Students must apply for graduation either by paper application or on the UTSA web site no later than the stated deadline date of the semester they intend to graduate. A degree candidate waiting until the final semester of enrollment to apply for graduation must apply no later than October 1 for the Fall Semester, February 1 for the Spring Semester, or June 15 for the Summer Semester. The application for graduation of any student submitted after the established deadlines for that semester is processed for graduation for the following semester.

Degree Verification

The college in which the student is enrolled is responsible for auditing the student’s degree plan to see that uniform requirements for each degree are met.

Graduation verification is a two-step process. The college of the student’s degree/major does a preliminary verification in order to clear the student to participate in a fall or spring commencement ceremony. The student is responsible for completing all coursework and providing any adjustments to the college by the end of the semester in which graduation is expected.

A final verification occurs once all grades are posted for the graduation semester; the degree plan is reviewed again, and the college dean concurs with the graduation. At the completion of this process, a diploma is printed and mailed to the eligible graduate.

Students who apply for the degree in a given semester but do not fulfill all requirements must submit a new application for graduation with the appropriate fee before the deadline for the semester in which they intend to graduate.

Graduation with Honors

See the current issue of UTSA Information for Graduation with Honors criteria.
Photo - College of Business
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COLLEGE OF BUSINESS

Mission Statement

The mission of the College of Business is to offer graduate and undergraduate programs of high quality that meet the needs of students, in terms of their general education as well as in their preparation for productive and rewarding professional careers. This focus requires that the college be alert and responsive to local, regional, and national issues and to the needs of business, government, and the community at large. Its faculty approaches the challenge of education not only through their classroom and advising efforts but by active scholarship in their respective disciplines and through service to the University, their profession, and the community.

General Information

All eligible undergraduate degrees in the College of Business are accredited by AACSB International and conform to its recommended guidelines. Consistent with AACSB guidelines, at least 50 percent of the business semester credit hours required for the College of Business degree must be taken at UTSA.

Students in the College of Business may not enroll in specified 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 credit hours in this college without approval of the Dean of the College of Business.

The College of Business is a member of the Consortium of Universities for International Business Studies. This consortium of AACSB-accredited colleges of business maintains undergraduate and graduate sites (Paderno and Asolo, respectively) in northeast Italy (approximately 25 miles north of Venice). The University of Kansas is the “umbrella” school for the Consortium and provides administrative and other support. Consortium students are provided an opportunity to further internationalize their business education through a semester of study abroad. As a member of the Consortium, UTSA College of Business undergraduate students who meet certain academic requirements are eligible to take business and economics courses offered by the Consortium and taught in English. Courses are also offered in Italian, Communication Studies, and Journalism. The Consortium provides on-campus dorms, meals, and other support for both undergraduate and graduate students. Organized factory visits and cultural study trips are also offered to students as part of the program.

The Leadership Challenge program gives undergraduate business students an opportunity to enhance their understanding of leadership and to develop personal leadership skills. Undergraduate business students are exposed to community and corporate leaders, corporate work environments, special projects, dialogues, and speakers. A limited number of students are selected into the Leadership Challenge based on their academic achievements, extra-curricular activities, community service, and leadership potential. For further information, contact the Center for Professional Excellence at 210-458-4778.

Scholarships

The College of Business has many scholarships available to assist students in reaching their educational and career goals. The scholarship program within the College is managed generally within the College of Business Student Advising Center, located in the Business Building in room BB 2.02.04. Some scholarships are administered through the various departments within the College of Business; however, students should visit the Advising Center for information and application procedures for all scholarships within the College. Detailed information and eligibility requirements for specific scholarships administered through the College are available at the Advising Center’s Web page at http://business.utsa.edu/undergraduate. Other scholarship information is available through the UTSA Scholarship Office. Scholarship eligibility requirements differ and the number and amounts of the scholarship awards vary. Students must complete the application process and submit required documentation by the deadlines stated on application materials. Students will be considered for all awards for which they meet the eligibility criteria. Award amounts are generally disbursed equally among the semesters covered by the scholarship as long as recipients continue to meet grade point, enrollment, and other scholarship criteria.
Declaration of a major in the College of Business, for students pursuing the Bachelor of Business Administration degree, is limited to students who meet the following minimum requirements:

1. Completion of 45 semester credit hours
2. Cumulative grade point average of 2.5 (2.0 for the B.B.A. in General Business)
3. Completion of 24 semester credit hours, 8 courses with a grade point average of 2.25 (2.00 for the B.B.A. in General Business) that include:
   a. The Texas Higher Education Coordinating Board Field of Study Curriculum for Business, and
   b. MS 1013 Quantitative Methods for Business and Economics, or its equivalent.

The Texas Higher Education Coordinating Board Field of Study Curriculum for Business consists of seven (7) courses with the following Texas Common Course Numbers (TCCN). UTSA courses satisfying this requirement are listed in brackets.

2 Courses in Accounting:
   TCCN: ACCT 2301 (ACC 2013 Principles of Accounting I)
   TCCN: ACCT 2302 (ACC 2033 Principles of Accounting II)

2 Courses in Economics:
   TCCN: ECON 2301 (ECO 2013 Introductory Macroeconomics)
   TCCN: ECON 2302 (ECO 2023 Introductory Microeconomics)

1 Course in Mathematics:
   TCCN: MATH 1325 (MAT 1033 Algebra with Calculus for Business)

1 Course in Computer Literacy:
   TCCN: BCIS 1305 (IS 1403 Business Information Systems Fluency)

1 Course in Speech:
   TCCN: SPCH 1321 (COM 1053 Business and Professional Speech)

Once these requirements are met, a student must request a declaration of major through the Undergraduate Business Advising Office.

**Early Declaration of a Major (EDM) Option**

Entering freshmen who have demonstrated high achievement are eligible for the Early Declaration of a Major option. To be eligible for EDM, a student must be classified as a First-Time Freshman as set forth in the current UTSA Information bulletin. A First-Time Freshman may declare one of the discipline majors in the College of Business upon matriculation or anytime during his or her first long-semester in residence at UTSA if he or she meets the following requirements:

1. graduated in the top ten percent of his or her graduating class, or scored at or above the 90th percentile on either the SAT or ACT examination, and
2. is TASP exempt or has passed all sections of the TASP prior to the declaration of the major.

Students who meet these qualifications and who wish to exercise the EDM option should contact the Tomás Rivera Center for assistance.
Common Body of Knowledge

All students seeking a B.B.A. degree in the College of Business must complete the following Common Body of Knowledge (CBK) courses in addition to the Core Curriculum:

<table>
<thead>
<tr>
<th>Course or Requirement</th>
<th>Semester Credit Hours</th>
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<tbody>
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</tbody>
</table>

Students completing degree course requirements with less than 120 semester credit hours will augment their program with electives taken outside the College of Business to reach that total.

Bachelor of Business Administration Degree in General Business

The Bachelor of Business Administration degree in General Business is an interdisciplinary program within the College of Business. The minimum number of semester credit hours for this degree is 120.

All candidates seeking this degree must fulfill the Core Curriculum requirements, the Common Body of Knowledge requirements, and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Business Administration degree in General Business must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhetoric (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement: ENG 1013 Freshman Composition ENG 1023 Discourse across the Disciplines</td>
</tr>
</tbody>
</table>
# Common Body of Knowledge (CBK)

All students seeking a B.B.A. degree in the College of Business must complete the following Common Body of Knowledge (CBK) courses in addition to the Core Curriculum.

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<tr>
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</tbody>
</table>
In addition to the Core Curriculum requirements and requirements of the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete the following degree requirements.

**Degree Requirements**

A. 24 semester credit hours of required courses:

- ECO 3033 Economics of Managerial Decisions
- FIN 3313 Money and Banking
- BLW 3023 Business Organizations and Commercial Law
- MGT 3023 Understanding People and Organizations
- MKT 4013 Marketing Management

9 additional semester credit hours of upper-division courses in the College of Business, of which no more than 6 semester credit hours can be in any one discipline in the college and at least 3 semester credit hours must be at the 4000 level.

B. ENG 2413 Technical Writing

C. 6 semester credit hours of electives outside the College of Business

**Minor in Business Administration**

A Minor in Business Administration is open to all nonbusiness majors (including B.A. in Economics) in the University. Business majors are not eligible to pursue a Minor in Business Administration. Students pursuing this minor should elect to take ECO 2013 Introductory Microeconomics (Domain IID) as part of their Core Curriculum requirements. In addition, the following 21 semester credit hours are required in the College of Business:

- ACC 2013 Principles of Accounting I
- BLW 3013 Business Law
- ECO 2023 Introductory Microeconomics
- FIN 3003 Survey of Finance
- IS 1403 Business Information Systems Fluency
- MGT 3013 Introduction to Organization Theory, Behavior, and Management
- MKT 3013 Principles of Marketing

**COURSE DESCRIPTIONS**

**GENERAL BUSINESS ADMINISTRATION**

**2013**  
*Social and Ethical Issues in Business*  
(3-0) 3 hours credit.  
A study of the social and ethical responsibilities of business organizations and of the people who work in those organizations.

**4011-3**  
*Seminar in Leadership*  
(1,2,3-0) 1, 2, or 3 hours credit.  
A seminar that engages students in a discussion of leadership and responsibility in business and other organizations.
DEPARTMENT OF ACCOUNTING

Mission Statement

The mission of the Department of Accounting is to offer graduate and undergraduate accounting programs of high quality, which meet the needs of the students preparing for professional careers in accounting. This mission includes providing a broad-based education as well as education in current business and accounting topics. The department is responsive to the needs of employers and other constituents of its programs. The department is also alert to the current issues in the local, regional, and national environment, and plans and implements changes in the educational process to respond to those issues when needed. The faculty of the accounting programs assist in accomplishing this mission through a planned integration of their teaching, intellectual, and service contribution.

DEPARTMENT HONORS

The Department of Accounting offers the opportunity for certain of its outstanding students to achieve the designation of Honors in Major and provides the opportunity for advanced study under close faculty supervision.

Selection for honors designation is based on the student’s academic performance and recommendation by the Department Undergraduate Program Committee (UPC) in consultation with the faculty of the student’s major discipline. To be eligible for the designation, students must have a minimum overall grade point average of 3.0 at UTSA and a minimum grade point average of 3.5 in their major. To enroll in honors thesis courses and to graduate with the honors designation, these minimum grade point averages must be maintained. Students applying for Honors in Major are expected to enroll in the appropriate honors thesis course during the final two semesters. The completed thesis must be approved by the supervising faculty sponsor from the student’s discipline and the UPC. Students interested in this program should contact the UPC through the Department of Accounting office for additional information. Department honors can be attained independent of or in addition to University Honors.

Bachelor of Business Administration Degree in Accounting

The minimum number of semester credit hours for the Bachelor of Business Administration degree in Accounting is 120.

All candidates seeking this degree must fulfill the Core Curriculum requirements, the Common Body of Knowledge requirements, and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Business Administration degree in Accounting must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

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UTSA 2002–2004 Undergraduate Catalog
Common Body of Knowledge (CBK)

All students seeking a B.B.A. degree in the College of Business must complete the following Common Body of Knowledge (CBK) courses in addition to the Core Curriculum.

| Domain I: Mathematics and Science | Mathematics (3 semester credit hours) | MAT 1033 Algebra with Calculus for Business |
| Domain II: Society and Culture | United States History and Diversity (6 semester credit hours) | Any six hours listed under this section in the list of core courses will satisfy this core requirement. |
| Domain III: Literature and the Arts | Literature (3 semester credit hours) | Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
| Domain IV: Interdisciplinary Studies | The Arts (3 semester credit hours) | Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
| | (3 semester credit hours) | Any three hours listed under this section in the list of core courses will satisfy this core requirement. |

**Course or Requirement**

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</table>
In addition to the Core Curriculum requirements and requirements from the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete the following degree requirements.

Degree Requirements

A. 18 semester credit hours of accounting courses in the major:

- ACC 3023 Intermediate Accounting I
- ACC 3033 Intermediate Accounting II
- ACC 3043 Federal Income Taxation I
- ACC 3113 Accounting Information Systems I
- ACC 3123 Cost Analysis
- ACC 4013 Principles of Auditing

B. 6 semester credit hours of upper-division courses in accounting of which no more than 3 semester credit hours may be satisfied by completing ACC 4933, Accounting Internship.

C. 9 semester credit hours of electives outside the College of Business

Notes for students who intend to take the CPA examination:

1. Because of the topical coverage of the CPA examination, BLW 3023 Business Organizations and Commercial Law is recommended as an elective for students who anticipate taking the CPA examination.

2. The educational requirements for candidates applying for the CPA examination in Texas are regulated by the Texas State Board of Public Accountancy. Students with questions about requirements or eligibility should contact the Texas State Board of Public Accountancy, 333 Guadalupe, Tower III, Suite 900, Austin, TX 78701 or 512/305-7870 or visit their website at http://www.tsbpa.state.tx.us.

3. The number of accounting hours required to earn a BBA in Accounting is inadequate to sit for the CPA Examination under current Texas state law. Please refer to the Professional Accounting Program information following the description of ACC 4993.

COURSE DESCRIPTIONS
ACCOUNTING
(ACC)

2003 Foundations of Accounting (3-0) 3 hours credit.
A study of accounting as the language of business. The focus is on accounting as a tool for communicating financial information for planning, control, and decision making. This course is designed for nonbusiness majors and cannot be applied toward a degree in the College of Business.

2013 Principles of Accounting I (3-0) 3 hours credit.
An introduction to business external financial reporting designed to create an awareness of the accounting concepts and principles used in preparing the three basic financial statements: the income statement, balance sheet, and statement of cash flows. The course is designed for all business students, whether future users or preparers of accounting information. [TCCN: ACCT 2301.]

2033 Principles of Accounting II (3-0) 3 hours credit. Prerequisite: ACC 2013.
An introduction to the determination, development, and uses of internal accounting information needed by business management to satisfy customers while controlling and containing costs. The course is designed for all business students, whether future users or preparers of accounting information. [TCCN: ACCT 2302.]
3023 Intermediate Accounting I  
(3-0) 3 hours credit. Prerequisite: ACC 2033.  
An in-depth study of promulgated accounting theory and concepts with an emphasis on corporate financial accounting and reporting.

3033 Intermediate Accounting II  
(3-0) 3 hours credit. Prerequisite: A grade of “C” or better in ACC 3023.  
A continuation of the in-depth study of promulgated accounting theory and concepts with an emphasis on corporate financial accounting and reporting.

3043 Federal Income Taxation I  
(3-0) 3 hours credit. Prerequisite: A grade of “C” or better in ACC 3023.  
Fundamentals of federal income tax accounting for individuals. Topics include income and exclusions, statutory deductions, depreciation, sale of business assets, capital gains and losses, and computation of tax.

3113 Accounting Information Systems I  
(3-0) 3 hours credit. Prerequisites: ACC 2033 and IS 3003.  
Examines the role of accounting information systems within the organizational structure. A conceptual framework for integrating elements required to support accounting information systems. (Formerly IS 3013. Credit cannot be earned for both ACC 3113 and IS 3013.)

3123 Cost Analysis  
(3-0) 3 hours credit. Prerequisite: ACC 2033.  
A study of internal accounting information generation with an emphasis on cost measurement and control. Topics include cost allocation, unit cost determination, variance analysis, and related quantitative methods.

4013 Principles of Auditing  
(3-0) 3 hours credit. Prerequisites: A grade of “C” or better in both ACC 3033 and 3113.  
A study of the topic of auditing oriented toward primarily the financial auditing standpoint. The course focuses on the concepts and procedures of auditing applied to the audit of financial statements. Topics also covered include professional ethics, internal and operational auditing, accounting and review services, and the public accounting profession.

4053 Accounting for Governmental and Not-for-Profit Organizations  
(3-0) 3 hours credit. Prerequisite: ACC 3033.  
A study of accounting, budgeting, fiscal procedures, and financial records of governmental agencies and private not-for-profit organizations.

4073 Intermediate Accounting III  
(3-0) 3 hours credit. Prerequisite: A grade of “C” or better in ACC 3033.  
A study of specialized financial reporting topics, including the application of professional standards and case-study analyses.

4153 Federal Income Taxation II  
(3-0) 3 hours credit. Prerequisite: A grade of “C” or better in ACC 3043.  
A study of the taxation of flow through organizations and partnerships. Topics include the formation, income taxation, and liquidation of flow through organizations and partnerships.

4613 Accounting Information Systems II  
(3-0) 3 hours credit. Prerequisite: A grade of “C” or better in ACC 3113.  
A study of database management systems as they relate to the accounting function. Topics include database design and applications that focus on accounting, including the entity-relationship model, data modeling, object-oriented design, and database management.
4623 Managerial Accounting
(3-0) 3 hours credit. Prerequisite: A grade of "C" or better in ACC 3123.
A study of business management's internal accounting information needs as they pertain to economic decision-making, planning, and control. Topics include cost behavior, cost accumulation alternatives, transfer pricing, cost allocation issues, and budgeting and performance measurement.

4911-3 Independent Study
1 to 3 hours credit. Prerequisite: Permission in writing from the instructor, the Department Chair, and the Dean of the College of Business. See Undergraduate Business Advising Office for the required forms. Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4933 Internship in Accounting
3 hours credit. Prerequisites: ACC 3023, an overall 2.5 grade point average, and permission in writing from the instructor, the Department Chair, and the Dean of the College of Business. See Undergraduate Business Advising Office for required forms. 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. ACC 4933 may be completed only once for undergraduate degree credit.

4943 CPA Examination Review
(3-0) 3 hours credit. Prerequisites: 150 semester credit hours and 36 accounting semester credit hours, or consent of instructor. Intensive review of accounting, auditing, and legal topics that appear on the uniform CPA examination. Extensive out-of-class preparation is required. Credit received for completion of this course will not count toward degree completion for an accounting major. The Texas State Board of Public Accountancy does not count credit earned in CPA review toward the educational requirements to become a CPA. (Course does not count toward any degree in business.)

4953 Special Studies in Accounting
(3-0) 3 hours credit. Prerequisite: Consent of Instructor. An organized course offering the opportunity for specialized study of accounting topics not normally or not often available as part of the regular course offerings. ACC 4953 may be completed only once for degree credit.

4993 Honors Thesis
3 hours credit. Prerequisite: Enrollment limited to students applying for Honors in Accounting (see page 28). Supervised research and preparation of an honors thesis. May be repeated once for credit with advisor’s approval. No more than 3 semester credit hours can apply toward accounting major requirements.

Professional Accounting (150-hour) Program. Students may enter the Professional Accounting (150-hour) Program at the beginning of their senior year. The program combines the curriculum of the Bachelor of Business Administration in Accounting degree program with the Master of Science in Accounting degree program to provide an integrated 150-hour degree program. Students may take undergraduate and graduate courses during their fourth and fifth years. A primary advantage of this program is that students may spread the 30 hours required for the Master of Science in Accounting degree over two years without increasing the time required to complete the degree. The BBA degree with a major in accounting will be awarded simultaneously with the Master of Science in Accounting degree on completion of all required coursework in both programs.
Admission requirements to the professional program. Students should apply for the program in their junior year of the BBA in Accounting major program. The requirements for admission are:

1. A student must be a declared accounting major before applying for admission to the professional accounting program.
2. A student must have a 3.0 overall grade point average and a 3.0 grade point average in accounting courses.
3. A student must have completed a minimum of 6 semester credit hours of accounting including ACC 3023, Intermediate Accounting I, before applying.
4. A student must have completed 12 hours of upper-level accounting courses by the first semester of enrollment in the professional program.

Undergraduate students seeking unconditional admission to the Professional Accounting Program must take the GMAT examination prior to the first semester of their senior year of enrollment.
DEPARTMENT OF ECONOMICS

The Department of Economics offers both a Bachelor of Arts degree and a Bachelor of Business Administration degree in Economics. Economics is a highly versatile major that assists students in pursuing a variety of careers, including positions in business, the public sector, the legal field, and politics, where a knowledge of economics is a fundamental asset. The department also offers a minor in economics that is available to students with majors in other business-related areas as well as nonbusiness majors.

DEPARTMENT HONORS

The Department of Economics offers the opportunity for certain of its outstanding students to achieve the designation of Honors in Major and provides the opportunity for advanced study under close faculty supervision.

Selection for honors designation is based on the student’s academic performance and recommendation by the Department Undergraduate Program Committee (UPC) in consultation with the faculty of the student’s major discipline. To be eligible for the designation, students must have a minimum overall grade point average of 3.0 at UTSA and a minimum grade point average of 3.5 in their major at UTSA. To enroll in honors thesis courses and to graduate with the honors designation, these minimum grade point averages must be maintained. Students applying for Honors in Major are expected to enroll in the appropriate honors thesis course during their final two semesters. The completed thesis must be approved by the supervising faculty sponsor from the student’s discipline and the UPC. Students interested in this program should contact the Department of Economics office for additional information. Department honors can be attained independent of or in addition to University Honors.

Bachelor of Business Administration Degree in Economics

The minimum semester credit hours for the Bachelor of Business Administration degree in Economics is 120.

All candidates seeking this degree must fulfill the Core Curriculum requirements, the Common Body of Knowledge (CBK) requirements, and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Business Administration degree in Economics must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

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<thead>
<tr>
<th>Core Curriculum Requirements</th>
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<tbody>
<tr>
<td>Rhetoric (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement:</td>
</tr>
<tr>
<td></td>
<td>ENG 1013 Freshman Composition</td>
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<tr>
<td></td>
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<td>Three hours from Level One and three hours from Level Two under the appropriate sections in</td>
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Common Body of Knowledge (CBK)

All students seeking a B.B.A. degree in the College of Business must complete the following Common Body of Knowledge (CBK) courses in addition to the Core Curriculum.

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<thead>
<tr>
<th>Domain II: Society and Culture</th>
<th>United States History and Diversity (6 semester credit hours)</th>
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<td>Any six hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<td></td>
<td>Political Studies (6 semester credit hours)</td>
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<tr>
<td></td>
<td>POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<td></td>
<td>Social and Behavioral Sciences (3 semester credit hours)</td>
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Degree Requirements

A. 15 upper-division semester credit hours in the major:

ECO 3033 Economics of Managerial Decisions
ECO 3053 Aggregate Economic Analysis
9 additional semester credit hours of upper-division electives in economics selected to complement the courses in the student's track. Economics majors who wish to pursue a graduate degree in economics are encouraged to take ECO 3113 and ECO 3123.

B. 3 semester credit hours of upper-division non-economics electives within the College of Business

C. 9 semester credit hours of electives from outside the College of Business selected to complement the courses in the student's track. (NOTE: MAT 1214 is required for the Managerial Economics Track and all economics majors who wish to pursue a graduate degree in economics are encouraged to take MAT 1214 and MAT 1223. It is recommended that students in the Managerial, Financial, and Public Sector Economics tracks take ACC 3123, ACC 3023, and ACC 4053, respectively.)

D. 6 semester credit hours in a track:

Managerial Economics Track
ECO 3113 Introduction to Mathematical Economics
ECO 3123 Forecasting Techniques in Business and Economics

Financial Economics Track
FIN 3033 Principles of Investment
FIN 3313 Money and Banking

Public Sector Economics Track
6 semester credit hours from:
ECO 3213 Government Regulation of Industry
ECO 3253 Economics of Public and Social Issues
ECO 3273 Public Sector Economics
ECO 4273 Environmental and Resource Economics

Bachelor of Arts Degree in Economics

The minimum semester credit hours for the Bachelor of Arts degree in Economics is 120.

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Arts degree in Economics must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.
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In addition to the Core Curriculum requirements, all candidates for the degree must complete the following degree requirements. Thirty-nine of the total hours required for the degree must be at the upper-division level.

## Degree Requirements

A. 39 semester credit hours of required courses in the major:

- COM 1053 Business and Professional Speech
- ECO 2013 Introductory M acroeconomics
- ECO 2023 Introductory M icroeconomics
- ECO 3013 Theory of Price
- ECO 3053 Aggregate Economics A nalysis
- M S 1013 Quantitative M ethods for Business and Economics

21 semester credit hours in upper-division economics courses, including those required for the chosen track.
B. 39 additional semester credit hours, including those required for the chosen track.

**Tracks:**

**Social Science (12 semester credit hours required)**

Within the 39 additional semester credit hours, 12 semester credit hours of social science electives selected from American studies (AMS), anthropology (ANT), bicultural-bilingual studies (BBL), criminal justice (CRJ), geography (GRG), history (HIS), political science (POL), psychology (PSY), and sociology (SOC).

**Professional Economist (13 semester credit hours required)**

Within the 21 semester credit hours of upper-level economics, students choosing this option must take ECO 3113 and ECO 3123.

Within the 39 additional semester credit hours, students choosing this option must take MAT 1214 and MAT 1223.

**Pre-Law* (18 semester credit hours required)**

Within the 39 additional semester credit hours, students choosing this option must take BLW 3013, POL 3323, and 12 semester credit hours of social science electives selected from American studies (AMS), anthropology (ANT), bicultural-bilingual studies (BBL), criminal justice (CRJ) geography (GRG), history (HIS), political science (POL), psychology (PSY), and sociology (SOC).

* For information, please refer to “Preprofessional Courses of Study in Law, Medicine, or Business” on page 453 of this catalog.

**Minor in Economics**

All students pursuing the Minor in Economics must complete 18 semester credit hours.

A. 6 semester credit hours of required courses:

- ECO 2013 Introductory Macroeconomics
- ECO 2023 Introductory Microeconomics

B. 12 additional semester credit hours of upper-division economics courses

To declare a Minor in Economics, obtain advice, and seek approval of substitutions for course requirements, students must consult the Undergraduate Business Advising Office.

**COURSE DESCRIPTIONS**

**ECONOMICS (ECO)**

**2003 Introduction to Political Economy**

(3-0) 3 hours credit.

A nontechnical introduction to economic concepts such as scarcity, costs and benefits, supply and demand, trade, employment, and growth, with applications to current economic issues and policies. May not be counted toward a major in economics, but may be counted as a free elective for College of Business students. [TCCN: ECON 1301.]
2013 **Introductory Macroeconomics**  
(3-0) 3 hours credit. Prerequisite: Placement into a college-level mathematics course.  
Economic analysis at the national level, including the determination of aggregate income and employment, operation of the domestic and international monetary systems, short-term income fluctuations, and long-term economic growth. [TCCN: ECON 2301.]

2023 **Introductory Microeconomics**  
(3-0) 3 hours credit. Prerequisite: Placement into a college-level mathematics course.  
An introduction to the economic theory of decision-making by consumers and business firms; an analysis of the domestic and international market systems and their roles in allocating goods and services; and problems of market failure. [TCCN: ECON 2302.]

3013 **Theory of Price**  
(3-0) 3 hours credit. Prerequisites: ECO 2013, ECO 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 Managerial Decisions**  
(3-0) 3 hours credit. Prerequisites: ECO 2013, ECO 2023, and MAT 1033, or their equivalents.  
Managerial economic decisions in firms and related entities. Topics include demand analysis, least-cost production, profit strategy, the influence of various market structures on the firm, advanced issues in pricing, and the impact of the international sector.

3053 **Aggregate Economic Analysis**  
(3-0) 3 hours credit. Prerequisites: ECO 2013 and 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; and long-term growth.

3113 **Introduction to Mathematical Economics**  
(3-0) 3 hours credit. Prerequisites: Completion of or concurrent enrollment in ECO 3013, 3033, 3053, or the equivalent; MAT 1033 or the equivalent; or consent of instructor.  
Systematic approach to economic analysis using basic mathematical tools; treatment of optimizing behavior with applications to consumer and business firms; emphasis on understanding and application of analytical techniques.

3123 **Forecasting Techniques in Business and Economics**  
(3-0) 3 hours credit. Prerequisites: MAT 1033, M S 1013, and IS 3003, 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 microcomputer programs in econometric modeling and forecasting.

3163 **Evolution of Economic Thought**  
(3-0) 3 hours credit.  
Development of economic theories, models, and schools of thought from the birth of market economies to the present, with an emphasis on the historical, institutional, and social forces shaping economic thinking and public policy.

3183 **Economic History of the United States**  
(3-0) 3 hours credit. Prerequisite: One of the following: ECO 2003, 2013, 2023, or the equivalent.  
The growth and development of the American economy from colonial times to the present; emphasis on applying a variety of economic concepts to a topical study of the economic forces that shaped the country’s history.

3193 **The International Economy**  
(3-0) 3 hours credit. Prerequisite: One of the following: ECO 2003, 2013, 2023, 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; and the role of international organizations.
3213  Government Regulation of Industry  
(3-0) 3 hours credit. Prerequisite: One of the following: ECO 2003, 2023, 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: One of the following: ECO 2003, 2013, 2023, 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: One of the following: ECO 2003, 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 Sector Economics  
(3-0) 3 hours credit. Prerequisites: One of the following: ECO 2003, 2023, or the equivalent. 
Role of government in the marketplace; cost-benefit analysis; spending and regulatory alternatives; efficiency 
and equity analysis of taxes; incentives within government; public policy issues.

3283  Labor Economics  
(3-0) 3 hours credit. Prerequisite: ECO 2003, 2013, 2023, the equivalent, or consent of instructor. 
Theories of wages and employment determination. U.S. labor history, comparative labor movements, and 
contemporary labor problems.

4273  Environmental and Resource Economics  
(3-0) 3 hours credit. Prerequisite: ECO 2003, 2023, or the equivalent. 
Economic principles applied to natural resource and environmental problems; relationship of market and 
nonmarket forces to environmental quality and demands for natural resources; and development of tools for 
policy analysis.

4303  Economic Problems of Developing Countries  
(3-0) 3 hours credit. Prerequisite: One of the following: ECO 2003, 2013, the equivalent, or consent of instructor. 
Specific economic problems of developing countries and national groupings; basic approaches to economic 
development; major proposals for accelerating development; role of planning; and trade, aid, and economic 
integration.

4473  Doing Business in Mexico  
(3-0) 3 hours credit. 
An overview of international business activities in Mexico, including such topics as the economics of Mexico, 
the Mexican legal system, NAFTA, Mexican accounting and taxation, international joint ventures, cross-cultural 
differences, and business protocol.

4913  Independent Study  
3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the 
Department Chair, and the Dean of the College of Business. 
Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be 
repeated for credit, but not more than 6 semester credit hours of independent study, regardless of discipline, will 
apply to a bachelor’s degree.
4933 Internship in Economics
3 hours credit. Prerequisites: 12 semester credit hours of upper-division economics, an overall 2.5 grade point average, and permission in writing from the instructor, the Department Chair, and the Dean of the College of Business. See Undergraduate Business Advising Office for required forms. This opportunity for work experience in research or applied economics may be undertaken either in private business or a public agency; opportunities are developed in consultation with the faculty advisor and Department Chair and require approval of both. This course will not count as a required economics course. Internships may be repeated (a total of 6 semester credit hours) provided the internships are with different organizations.

4953 Special Studies in Economics
(3-0) 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 may be repeated for credit when topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4993 Honors Thesis
3 hours credit. Prerequisite: Enrollment limited to students applying for Honors in Economics (see page 33). Supervised research and preparation of an honors thesis. May be repeated once for credit with advisor’s approval.
DEPARTMENT OF FINANCE

The Department of Finance offers a Bachelor of Business Administration degree in Finance and a Bachelor of Business Administration degree in Construction Management. A major in finance gives students the opportunity to learn the basic financial theories and applications needed in managerial financial decision-making. Specializations in finance include corporate finance, investments, banking, insurance, real estate, and financial institutions and markets. The degree in construction management is offered by the department with support from the architecture program. This major is designed for students interested in managing businesses associated with real estate and the planning, financing, development, and construction of building projects. The department also offers a minor in finance that is available to students with majors in other business-related areas as well as nonbusiness majors.

DEPARTMENT HONORS

The Department of Finance offers the opportunity for certain of its outstanding students to achieve the designation of Honors in Major and provides the opportunity for advanced study under close faculty supervision.

Selection for honors designation is based on the student’s academic performance and recommendation by the Department Undergraduate Program Committee (UPC) in consultation with the faculty of the student’s major discipline. To be eligible for the designation, students must have a minimum overall grade point average of 3.0 at UTSA and a minimum grade point average of 3.5 in their major at UTSA. To enroll in honors thesis courses and to graduate with the honors designation, these minimum grade point averages must be maintained. Students applying for Honors in Major are expected to enroll in the appropriate honors thesis course during their final two semesters. The completed thesis must be approved by the supervising faculty sponsor from the student’s discipline and the UPC. Students interested in this program should contact the Department of Finance office for additional information. Department honors can be attained independent of, or in addition to, University Honors.

Bachelor of Business Administration Degree in Finance

The minimum number of semester credit hours for the Bachelor of Business Administration degree in Finance is 120.

All candidates seeking this degree must fulfill the Core Curriculum requirements, the Common Body of Knowledge requirements, and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Business Administration degree in Finance must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

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<th>Core Curriculum Requirements</th>
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<td>Rhetoric (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement: ENG 1013 Freshman Composition ENG 1023 Discourse across the Disciplines</td>
</tr>
<tr>
<td>Domain I: Mathematics and Science</td>
<td>Mathematics (3 semester credit hours) MAT 1033 Algebra with Calculus for Business</td>
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<td>Science (6 semester credit hours) Three hours from Level One and three hours from Level Two under the appropriate sections in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>
All students seeking a B.B.A. degree in the College of Business must complete the following Common Body of Knowledge (CBK) courses in addition to the Core Curriculum.

### Common Body of Knowledge (CBK)

All students seeking a B.B.A. degree in the College of Business must complete the following Common Body of Knowledge (CBK) courses in addition to the Core Curriculum.

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In addition to the Core Curriculum requirements and requirements from the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete the following degree requirements.
Degree Requirements

A. 24 upper-division semester credit hours in the major and supporting area:

- ACC 3023 Intermediate Accounting I
- FIN 3033 Principles of Investment
- FIN 3313 Money and Banking

15 additional semester credit hours of finance electives; FIN 4873 Computer Modeling of Financial Applications is recommended as one of these finance electives

B. 9 semester credit hours of electives, which must be taken outside the College of Business

Minor in Finance

All students pursuing the Minor in Finance, with the exception of Construction Management majors (see degree requirement C on page 45), must complete 27 semester credit hours.

A. 18 semester credit hours of required courses:

- ACC 2013 Principles of Accounting I
- ACC 2033 Principles of Accounting II
- FIN 3013 Principles of Business Finance
- FIN 3033 Principles of Investment
- FIN 3313 Money and Banking
- MAT 1033 Algebra with Calculus for Business

B. 9 additional semester credit hours of upper-division finance electives

To declare a Minor in Finance, obtain advice and seek approval of substitutions for course requirements, students must consult the Undergraduate Business Advising Office.

Bachelor of Business Administration Degree in Construction Management

The Bachelor of Business Administration degree in Construction Management is offered by the College of Business with support from the architecture program. Architecture courses are described under the School of Architecture. The minimum number of semester credit hours for this degree is 123.

All candidates seeking this degree must fulfill the Core Curriculum requirements, the Common Body of Knowledge (CBK) requirements, and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Business Administration degree in Construction Management must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.
All students seeking a B.B.A. degree in the College of Business must complete the following Common Body of Knowledge (CBK) courses in addition to the Core Curriculum.

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<tr>
<td><strong>Domain II: Society and Culture</strong></td>
<td>United States History and Diversity (6 semester credit hours) Any six hours listed under this section in the list of core courses will satisfy this core requirement. Political Studies (6 semester credit hours) POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement. Social and Behavioral Sciences (3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement. Economics (3 semester credit hours) ECO 2013 Introductory Microeconomics</td>
</tr>
<tr>
<td><strong>Domain III: Literature and the Arts</strong></td>
<td>Literature (3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement. The Arts (3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td><strong>Domain IV: Interdisciplinary Studies</strong></td>
<td>(3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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Common Body of Knowledge (CBK)

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MKT 3013 Principles of Marketing 3
MS 1013 Quantitative Methods for Business and Economics 3
MS 3033 Management Science and Production Management 3

In addition to the Core Curriculum requirements and requirements from the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete the following degree requirements.

Degree Requirements

A. 15 upper-division semester credit hours of courses:
   - ARC 3203 Housing Design and Development
   - ARC 4613 Construction Management I
   - FIN 3433 Principles of Real Estate
   - FIN 4713 Mortgage Banking and Real Estate Finance
   - BLW 3523 Real Estate Law

B. 15 semester credit hours of support work:
   - ARC 2213 Construction Materials and Concepts
   - ARC 4013 Building Construction Estimating I
   - ARC 4113 Project Development
   - FIN 4723 Real Estate Investment
   - FIN 4903 Internship in Construction Management

C. 9 semester credit hours of electives to be selected from the following with no more than two classes from the same discipline unless a student is pursuing a minor. Those Construction Management majors who plan to pursue a minor in Finance must take all 9 semester credit hours of electives in Finance, to include FIN 3033, Principles of Investment.
   - ARC 4223 Topics in Design Computing
   - ARC 4233 Computer Projects in Design
   - ARC 4513 Professional Practice and Ethics
   - ARC 4423 History and Theory of Urban Form
   - FIN 3033 Principles of Investment
   - FIN 3043 Capital Structure and Budgeting
   - FIN 4313 Commercial Bank Management
   - FIN 4853 Real Estate Appraisal
   - FIN 4933 Internship in Finance
   - GRG 3513 Urban Geography
   - GRG 3523 Introduction to Urban Planning
   - GRG 3633 Geography of Development
   - GRG 3733 Urban and Regional Analysis
   - MGT 3023 Organizational Behavior
   - MGT 4883 Small Business Management
   - MKT 3063 Personal Selling
   - MKT 3083 Marketing Research
   - SOC 3033 Population Dynamics
   - SOC 3103 Complex Organizations
   - SPN 3153 Spanish for the Business/Management Fields
COURSE DESCRIPTIONS
FINANCE
(FIN)

2003 Consumer Finance in American Society
(3-0) 3 hours credit.
Examines various aspects of consumer finance choices in a market economy, including broad coverage of the following consumer decisions: assets such as bank accounts; major purchases such as housing and vehicles; management of credit cards and consumer loans; selecting life, health, and property insurance; investing in stocks, bonds, and mutual funds; and retirement, estate, and tax planning. This course may not be applied toward a major in finance but may be counted as a free elective for College of Business students. [TCCN: BUSI 1307.]

3003 Survey of Finance
(3-0) 3 hours credit. Prerequisite: ACC 2003.
A basic survey course focusing on three aspects of finance: the financial system, corporate finance, and investments. The financial environment will be described along with how the financial system interacts with the economy. Business decisions, efficient allocation of financial resources, and fundamentals of investment will be introduced. This course may not be applied toward a major in finance but may be counted as a free elective for College of Business students.

3013 Principles of Business Finance
(3-0) 3 hours credit. Prerequisites: ACC 2013, ACC 2033, and MAT 1033, or their equivalents.
Introduction to financial management techniques. Topics may include time value of money, valuation of stocks and bonds, risk and return, capital budgeting analysis, financing alternatives, financial planning, ratio analysis, short-term financial decisions, working capital, sources and uses of funds, capital structure, dividend policy, lease analysis, options, international financial management, and other topics associated with successful business finance decisions in an internationally competitive environment.

3023 Intermediate 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 may also be considered.

3033 Principles of Investment
(3-0) 3 hours credit. Prerequisite: FIN 3013 or the equivalent.
Introduction to securities markets; analysis of money market instruments, mutual funds, stocks, bonds, options, futures, and other securities; investment management in the light of tax considerations, timing, and selected portfolio needs.

3043 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 nonprofit institutions; development of allocation criteria for sources and uses of scarce financial resources. (Formerly FIN 4403. Credit cannot be earned for both FIN 3043 and FIN 4403.)

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; and operation of capital markets with reference to the United States.

3403 Cases in Financial Management
(3-0) 3 hours credit. Prerequisites: FIN 3033 and 3313, or their equivalents.
Advanced analysis of financial cases based on business problems. The application of financial theory and techniques is 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.

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, and trust and auxiliary functions.

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. Analysis of derivative securities and their use in the portfolio context.

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 multinational 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 3433 or 3033, or consent of instructor.  
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; and federal, state, and local laws governing housing discrimination, equal credit opportunity, and community reinvestment.

4723 **Real Estate Investment**  
(3-0) 3 hours credit. Prerequisites: FIN 3013 and 3433 or 3033, or consent of instructor.  
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. (Formerly FIN 3503. Credit cannot be earned for both FIN 3503 and FIN 4723.)
4813 Property-Liability Insurance Finance
(3-0) 3 hours credit. Prerequisite: FIN 3013 or the equivalent.
Analysis and management of risk and insurance, including the insurance contract, property insurance, liability insurance, business insurance, the insurance agency, financial structure and management of property-liability companies, and contemporary problems of property-liability insurance.

4823 Life and Health Insurance Finance
(3-0) 3 hours credit. Prerequisite: FIN 3013 or the equivalent.
Philosophy of the life risk is developed, as well as an understanding of the special character of life and health insurance, human life value, the customary and special uses of life insurance, and the history of life insurance companies. Life, health, and disability insurance contracts are investigated in addition to term and whole life insurance, agency structure, and current issues of life and health insurance.

4853 Real Estate Appraisal
(3-0) 3 hours credit. Prerequisites: FIN 3013 and 3433, their 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.

4873 Computer Modeling of Financial Applications
(3-0) 3 hours credit. Prerequisites: FIN 3013 and IS 3003, or their equivalents.
Provides the opportunity to develop computer modeling skills and techniques for analyzing financial situations encountered in business. Corporate decisions such as the analysis of financial statements, financial planning and forecasting, capital budgeting, and financing alternatives are modeled. Investment analysis topics include the valuation of stocks, bonds, and options, as well as performance analysis and portfolio management. Simulation techniques examine financial issues involving uncertainty.

4903 Internship in Construction Management
3 hours credit. Prerequisites: Completion of the 15 upper-division semester credit hours in the major and permission in writing from the instructor, the Department Chair, and the Dean of the College of Business. See Undergraduate Business Advising Office for required forms.
This internship, as a course in support of the major, is limited to the business and financial aspects of construction and will allow students to gain valuable experience in the field. The internship facilitates an integrative experience through interaction with entrepreneurs and building development business owners. Students engage in research projects, examine relevant issues and problems that builders and developers confront, and have the opportunity to engage in managerial work experience. Internship may be repeated once (for a total of 6 semester credit hours) provided the internships are with different organizations.

4913 Independent Study
3 hours credit. Prerequisite: Permission in writing from the instructor, the Department Chair, and the Dean of the College of Business. See Undergraduate Business Advising Office for required forms.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4933 Internship in Finance
3 hours credit. Prerequisites: 12 semester credit hours of upper-division finance courses, an overall 2.5 grade point average, and permission in writing from the instructor, the Department Chair, and the Dean of the College of Business. See Undergraduate Business Advising Office for required forms.
The opportunity for work experience in research of financial operations, including real estate and insurance, and may be undertaken in either private business or a public agency. Opportunities are developed in consultation with the faculty advisor and Department Chair and require approval of both. Internship may be repeated once (for a total of 6 semester credit hours) provided the internships are with different organizations, but only 3 hours may count toward the 21 hours of finance required for the major.
Special Studies in Finance
(3-0) 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 may be repeated for credit when the topics vary, but not more than 6
semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

Honors Thesis
3 hours credit. Prerequisite: Enrollment limited to students applying for Honors in Finance (see page 41).
Supervised research and preparation of an honors thesis. May be repeated once for credit with advisor’s
approval.
DEPARTMENT OF INFORMATION SYSTEMS

The Department of Information Systems offers an undergraduate degree program with a major in information systems. In addition, the Department offers minors in electronic commerce, information systems, and infrastructure assurance and security.

DEPARTMENT HONORS

The Department of Information Systems offers the opportunity for certain of its outstanding students to achieve the designation of Honors in Major and provides the opportunity for advanced study under close faculty supervision.

Selection for Honors designation is based on the student’s academic performance and recommendation by the Department Undergraduate Program Committee (UPC) in consultation with the faculty of the student’s major discipline. To be eligible for the designation, students must have a minimum overall grade point average of 3.0 at UTSA and a minimum grade point average of 3.5 in their major. To enroll in honors thesis courses and to graduate with the Honors designation, these minimum grade point averages must be maintained. Students applying for Honors in Major are expected to enroll in the appropriate honors thesis course during the final two semesters. The completed honors thesis must be approved by the supervising faculty sponsor from the student’s discipline and the UPC. Students interested in this program should contact the Department Chair for additional information. Major honors can be obtained independent of or in addition to University Honors.

Bachelor of Business Administration Degree in Information Systems

The minimum number of semester credit hours for the Bachelor of Business Administration degree in Information Systems is 126.

All candidates seeking this degree must fulfill the Core Curriculum requirements, the Common Body of Knowledge (CBK) requirements, and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Business Administration degree in Information Systems must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

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ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| Domain I: Mathematics and Science | Mathematics (3 semester credit hours)  
MAT 1033 Algebra with Calculus for Business  
Science (6 semester credit hours)  
Three hours from Level One and three hours from Level Two under the appropriate sections in the list of core courses will satisfy this core requirement. |
All students seeking a B.B.A. degree in the College of Business must complete the following Common Body of Knowledge (CBK) courses in addition to the Core Curriculum.

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In addition to the Core Curriculum requirements and the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete the following degree requirements.
Degree Requirements

A. 21 semester credit hours of Information Systems courses in the major:

   IS 3063 Database Management for Information Systems
   IS 3073 Application Development
   IS 3413 Introduction to Telecommunications for Business
   IS 4053 Analysis and Design of Information Systems
   IS 4063 Advanced Topics in Information Systems

   6 additional semester credit hours of upper-division information systems coursework

B. 12 semester credit hours of information systems support work:

   CS 1063 Introduction to Computer Programming
   IS 2033 Introduction to Computer Concepts for Information Systems
   IS 2043 Data Structures and File Processing
   PHI 2043 Introductory Logic

C. 6 semester credit hours of electives taken outside the College of Business

Minor in Electronic Commerce

The Electronic Commerce minor is open to all majors in the University but it is primarily for students in the College of Business majoring in Information Systems. Students majoring in Computer Science or Electronic Communication will also be interested in this minor. The number of hours for students enrolled as Information Systems majors in the College of Business is 18. Other students may require additional hours in order to meet prerequisite requirements.

The following courses are required:

   IS 3073 Application Development
   IS 3413 Introduction to Telecommunications for Business
   IS 4153 Design of Electronic Commerce Systems
   IS 4203 Business Process Reengineering
   IS 4453 Information Assurance and Security
   IS 4463 Secure Electronic Commerce

Minor In Information Systems

The minor in Information Systems is primarily for students in the College of Business but it is available for all university students. The number of hours for a student in the College of Business is 18. Other students may require additional hours in order to meet prerequisite requirements.

A. The following courses are required:

   IS 2043 Data Structures and File Processing
   IS 3003 Principles of Information Systems for Management
   IS 3063 Database Management for Information Systems
   IS 3413 Introduction to Telecommunication for Business
   IS 4053 Analysis and Design of Information Systems
B. One elective course must be selected from the following:

ACC 3113 Accounting Information Systems I
or
Any IS junior or senior level course that counts for the IS major.

Minor in Infrastructure Assurance and Security

The minor in Infrastructure Assurance and Security is open to all majors in the University. A student majoring in Information Systems will be required to take 18 hours of course work. Other majors may be required to take additional hours depending on their academic background.

A. The following courses are required:

IS 3003 Principles of Information Systems for Management
IS 3413 Introduction to Telecommunications for Business
IS 3423 Secure Network Design
IS 4143 Wide Area Networks
IS 4453 Information Assurance and Security

B. One elective course must be selected from the following:

IS 4463 Secure Electronic Commerce
IS 4473 Information Assurance Policy

COURSE DESCRIPTIONS
INFORMATION SYSTEMS
(IS)

1403 Business Information Systems Fluency
(3-0) 3 hours credit.
Required course for all students majoring in Business at UTSA. This three-unit course concentrates on a set of core computing skills that are essential to student success, such as using e-mail, programming, word processing, spreadsheets, basic data management, and on- and off-campus Internet resources. In addition, students will choose from among a set of more specialized or detailed systems and applications for additional study, based on interest and major field. This is a web-based course. [TCCN: BCIS 1305.]

2033 Introduction to Computer Concepts for Information Systems
(3-0) 3 hours credit. Prerequisite: CS 1063 or consent of Instructor.
An introduction to programming with procedural languages. Addresses basic elements of structured programming, including control structures, arrays, lists, sequential file access and update, and modular design.

2043 Data Structures and File Processing
(3-0) 3 hours credit. Prerequisite: IS 1403 or consent of Instructor.
An introduction to principles of computer programming and file organization including file structures, access methods, and abstract data types. A procedural language will be used to develop applications using these concepts.
3003 Principles of Information Systems for Management
(3-0) 3 hours credit. Prerequisite: IS 1403.
An analysis of managerial/organizational information needs. Systematic procedures for developing information systems are covered. Includes coverage of hardware and software tools, information structures, and formal problem-solving techniques. Issues related to organizational controls, security, and globalization as a result of changing technologies are discussed. Cases will be assigned to illustrate the use of specific tools and techniques for problem solving.

3053 Database Management for Business
(3-0) 3 hours credit. Prerequisite: IS 3003.
The use of databases in a contemporary environment, including an in-depth analysis of topics associated with the definition, creation, and use of databases for business-oriented applications. Topics will include current applications in the field of database management systems with hands-on experience with a database or data warehousing software. May not be applied to a major in information systems.

3063 Database Management for Information Systems
(3-0) 3 hours credit. Prerequisite: IS 2043.
A study of database management systems (DBMS) features, functions, and architecture, including logical design, data models, normalization, object-oriented data, and database administration. A DBMS product will be used to illustrate principles.

3073 Application Development
(3-0) 3 hours credit. Prerequisites: IS 2043, PHI 2043, and CS 1063.
A study of the use of information systems techniques to solve managerial problems. Includes cases where students are asked to design and implement information systems that address various classes of analytic problems. Principles of decision theory are addressed.

3083 Computer Graphics
(3-0) 3 hours credit. Prerequisite: Consent of Instructor.
Emphasis on the theory of animation and multimedia design of computer-generated images. Popular software packages will be used to demonstrate concepts and create animation and multimedia projects. Video and audio technologies, as well as creating animation and multimedia pages for the Internet, will be included.

3093 Computer Support of Groups
(3-0) 3 hours credit. Prerequisite: IS 3003.
This course is designed to examine the ways in which computers can be used to support the communication, coordination, and decision-making needs of groups. The course will study the problems that face-to-face and distributed groups encounter in an organizational environment and will review the technology available to address these problems.

3413 Introduction to Telecommunications for Business
(3-0) 3 hours credit. Prerequisite: IS 3003.
Includes an in-depth look at basic telecommunications terminology and concepts. Introduction to voice and data networks, signaling and multiplexing. Network topologies and protocol fundamentals and architectures are presented and compared. Frame relay, X.25, and ATM packet technologies are introduced. Network security fundamentals are explored. (Formerly IS 4123. Credit cannot be earned for both IS 3413 and IS 4123.)

3423 Secure Network Design
(3-0) 3 hours credit. Prerequisite: IS 3413 or Consent of Instructor.
The course provides a foundation in the issues and principles of the design and management of secure networks. Topics included in this course are network security, configuration management, fault management, and performance management. Current networking and network management software and the role played by network protocols and products will be discussed. (Formerly IS 4133. Credit cannot be earned for both IS 3423 and IS 4133.)
4053 **Analysis and Design of Information Systems**  
(3-0) 3 hours credit. Prerequisite: IS 3063.  
An introduction to systems theory and development techniques. Topics include problem definition, object-oriented design, issues for cost/benefit analyses, and CASE tools.

4063 **Advanced Topics in Information Systems**  
(3-0) 3 hours credit. Prerequisite: 15 semester credit hours of information systems courses (excludes IS 1403 and IS 3003).  
Survey of recent developments in information technology. Analysis will focus on applications in the business community and theoretical developments that relate to those applications. Ordinarily taken during semester of graduation.

4073 **The Information Resource**  
(3-0) 3 hours credit. Prerequisites: MGT 3013 and IS 3003.  
A study of the principles and concepts involved in the management of organizational information systems resources. Topics include project control, CIO functions, information systems planning, strategic impact of information systems, multinational organizations, and relevant legal, professional, and ethical issues.

4143 **Wide Area Networks**  
(3-0) 3 hours credit. Prerequisites: IS 3413 and consent of Instructor.  
This course explores the telecommunication technologies used in wide area networks. Technologies such as frame relay, ATM, TCP/IP, and voice over IP will be studied. The role of the common carriers will also be discussed. Secure network traffic over TCP/IP will be included.

4153 **Electronic Commerce**  
(3-0) 3 hours of credit. Prerequisite IS 3073 or permission of Instructor.  
A study of issues related to the use of electronic networks to facilitate inter- and intra-organizational business activities. The principles of web site design from the consumer and the information systems points of view will be presented. The course will also include the development of a web site.

4163 **Advanced Programming Concepts**  
(3-0) 3 hours credit. Prerequisite: IS 3063.  
A survey of programming languages and application development facilities. Topics may include procedural languages as well as very high-level languages, end-user application development languages, and object-oriented languages.

4183 **Advanced Database Concepts**  
(3-0) 3 hours credit. Prerequisite: IS 3063.  
In-depth consideration of concepts governing the design and management of database systems. Topics include database design, distributed databases, database administration, object-oriented data modeling, and performance evaluation.

4203 **Business Process Re-engineering**  
(3-0) 3 hours credit. Prerequisite: IS 4153 or consent of Instructor.  
The course examines the role of e-commerce in changing the business models. The use of the Internet as a way of changing the traditional models for marketing and manufacturing will be discussed. The focus of the course will be new product design, new business practices, and product life cycle, which are all affected by the use of the Internet and the new business models that are being developed.

4453 **Information Assurance and Security**  
(3-0) 3 hours credit. Prerequisite: IS 3413 or consent of Instructor.  
This course provides an in-depth presentation of information assurance topics such as fraud, eavesdropping, traffic analysis, intrusion detection and prevention, hacking, viruses, and cryptography. Risk management will also be discussed.
Secure Electronic Commerce  
(3-0) 3 hours credit. Prerequisites: IS 4453 or consent of Instructor.  
The security issues related to electronic commerce will be discussed in this course. The legal environment of e-commerce, public and private key encryption, digital signatures, authentication, and third party certificates are topics that will be included.

Information Assurance Policy  
(3-0) 3 hours credit. Prerequisite: IS 3413 and one three-credit-hour security course, or consent of Instructor.  
There are many policy issues, within the firm and at various levels of government, that affect information assurance. This course will examine how these policies affect electronic security. Subjects will include privacy of information, intellectual property protection, globalization of information systems, and other policy matters. The protection and control of secured information will also be discussed.

Independent Study  
1 to 3 hours credit. Prerequisite: Permission in writing from the instructor, the Department Chair, and the Dean of the College of Business. See the Undergraduate Business Advising Office for the required forms.  
Independent research in an information systems topic under the direction of a faculty member. May be repeated for credit, but not more than 6 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

Internship in Information Systems  
3 hours credit. Prerequisites: 9 semester credit hours of Information Systems courses (excluding IS 1403 and IS 3003), an overall 2.5 grade point average, and permission in writing from the Instructor, the Department Chair, and the Dean of the College of Business. See Undergraduate Business Advising Office for required forms.  
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. May not be repeated for credit.

Special Studies in Information Systems  
(3-0) 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 may be repeated for credit when the topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

Honors Thesis  
3 hours credit. Prerequisite: Enrollment limited to students applying for Honors in Information Systems (see page 50).  
Supervised research and preparation of an honors thesis. May be repeated once for credit with advisor’s approval. No more than 3 semester credit hours may apply toward information systems major requirements.
DEPARTMENT OF MANAGEMENT

DEPARTMENT HONORS

The Department of Management offers the opportunity for certain of its outstanding students to achieve the designation of Honors in Major and provides the opportunity for advanced study under close faculty mentorship.

Selection for honors designation is based on the student's academic performance and recommendation by the Department Undergraduate Programs Committee (UPC). To be eligible for the designation, students must have a minimum overall grade point average of 3.0 at UTSA and a minimum grade point average of 3.5 in their major at UTSA. To enroll in honors thesis courses and to graduate with the honors designation, these minimum grade point averages must be maintained. Students applying for Honors in Major are expected to enroll in the appropriate honors thesis course during their final two semesters. The completed thesis must be approved by the supervising faculty sponsor from the student’s discipline and the Undergraduate Programs Committee. Students interested in this program should contact the Department Chair for additional information. Department honors can be attained independently of and in addition to University Honors.

Bachelor of Business Administration Degree in Management

The minimum number of semester credit hours required for this degree is 120.

All candidates seeking this degree must fulfill the Core Curriculum requirements, the Common Body of Knowledge (CBK) requirements, and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Business Administration degree in Management must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students might need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

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<tr>
<th>Core Curriculum Requirements</th>
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<tr>
<td><strong>Rhetoric</strong> (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement: ENG 1013 Freshman Composition ENG 1023 Discourse across the Disciplines</td>
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<td><strong>Domain I: Mathematics and Science</strong></td>
<td><strong>Mathematics</strong> (3 semester credit hours) MAT 1033 Algebra with Calculus for Business <strong>Science</strong> (6 semester credit hours) Three hours from Level One and three hours from Level Two under the appropriate section in the list of core courses will satisfy this core requirement.</td>
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All students seeking a B.B.A. degree in the College of Business must complete the following Common Body of Knowledge (CBK) courses in addition to the Core Curriculum.

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<tr>
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<tr>
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<tr>
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<td>GBA 2013 Social and Ethical Issues in Business</td>
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<tr>
<td>IS 1403 Business Information Systems Fluency</td>
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<tr>
<td>IS 3003 Principles of Information Systems for Management</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1033 Algebra with Calculus for Business (Domain I)</td>
<td>3</td>
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<tr>
<td>MGT 3013 Introduction to Organization Theory, Behavior, and Management</td>
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<td>M S 1013 Quantitative Methods for Business and Economics</td>
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</tr>
<tr>
<td>M S 3033 Management Science and Production Management</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition to the Core Curriculum requirements and requirements from the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete the following degree requirements.
Degree Requirements

A. 15 required upper-division semester credit hours in the major:

- MGT 3023 Understanding People and Organizations
- MGT 3613 Managing Human Resources
- MGT 4213 Designing Organizations
- MGT 4923 Leading Organizations and Making Decisions
- MGT 4943 Managing Effective Teams and Resolving Conflict

B. 3 semester credit hours of support work in Management.

C. 6 semester credit hours of support work selected from College of Business upper-division electives, in addition to the Core Curriculum and CBK requirements.

D. 9 semester credit hours of upper-division electives from outside the College of Business, 6 hours of which must have International content. Such International content courses could include, but not be limited to:

- GRG 3123 Geography of Latin America
- GRG 3133 Geography of Europe
- HIS 3303 History of Mexico
- HIS 3353 Latin America Since Independence
- HIS 3523 European Cultural History
- POL 3393 Latin American Politics
- POL 3403 European Politics
- POL 3453 The Politics of Mexico

The courses listed above are examples. Any different types of courses can satisfy the requirement.

Bachelor of Business Administration Degree in Management with an International Business Concentration

The minimum number of semester credit hours required for this degree is 120.

All candidates seeking this degree must fulfill the Core Curriculum requirements, the Common Body of Knowledge (CBK) requirements, and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Business Administration degree in Management with an International Business Concentration must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

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<th>Core Curriculum Requirements</th>
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<tr>
<td><strong>Rhetoric</strong> (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement: ENG 1013 Freshman Composition ENG 1023 Discourse across the Disciplines</td>
</tr>
</tbody>
</table>
## Common Body of Knowledge (CBK)

All students seeking a B.B.A. degree in the College of Business must complete the following Common Body of Knowledge (CBK) courses in addition to the Core Curriculum.

<table>
<thead>
<tr>
<th>Domain I: Mathematics and Science</th>
<th>Mathematics (3 semester credit hours) MAT 1033 Algebra with Calculus for Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science (6 semester credit hours)</td>
<td>Three hours from Level One and three hours from Level Two under the appropriate sections in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain II: Society and Culture</th>
<th>United States History and Diversity (6 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Any six hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td>Political Studies (6 semester credit hours)</td>
<td>POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td>Social and Behavioral Sciences (3 semester credit hours)</td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td>Economics (3 semester credit hours)</td>
<td>ECO 2013 Introductory Macroeconomics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain III: Literature and the Arts</th>
<th>Literature (3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td>The Arts (3 semester credit hours)</td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain IV: Interdisciplinary Studies</th>
<th>(3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Any three hours from the following list will satisfy both this core requirement and a degree requirement:</td>
</tr>
</tbody>
</table>

- GRG 1023 World Regional Geography
- HIS 2533 Introduction to Latin American Civilization
- HIS 2543 Introduction to Islamic Civilization
- HIS 2553 Introduction to East Asian Civilization
- HIS 2573 Introduction to African Civilization
- HIS 2583 Introduction to South Asian Civilization
- IDS 2313 World Civilization since the Sixteenth Century

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### Course or Requirement

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<td>FIN</td>
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<td>GBA</td>
<td>2013 Social and Ethical Issues in Business</td>
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<td>IS</td>
<td>1403 Business Information Systems Fluency</td>
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<tr>
<td>IS</td>
<td>3003 Principles of Information Systems for Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**UTSA 2002–2004 Undergraduate Catalog**
In addition to the Core Curriculum requirements and requirements from the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete the following degree requirements.

Degree Requirements

A. 18 upper-division semester credit hours of international courses in the College of Business:

- MGT 4073 International Management
- MGT 4083 Comparative International Management Practices
- MKT 4073 International Marketing

9 semester credit hours selected from the following:

- ECO 3193 The International Economy
- ECO 4303 Economic Problems of Developing Countries
- ECO 4953 Special Studies in Economics (international topics only)
- FIN 4613 Introduction to International Finance
- MGT 3023 Understanding People and Organizations
- MKT 4953 Special Studies in Marketing (international topics only)

or other international business electives as approved by Department of Management faculty through the Undergraduate Business Advising Office.

B. 9 semester credit hours of directed elective support work outside the College of Business, as follows (*these courses may be taken to fulfill Core Curriculum requirements; if so, nonbusiness electives must be taken to fulfill the minimum 120 credit hours required for the degree):

1. 3 semester credit hours from the following:

- GRG 1023 World Regional Geography*
- GRG 3123 Geography of Latin America
- GRG 3133 Geography of Europe
- GRG 3213 Cultural Geography
- GRG 3613 Conservation of Resources
- GRG 3633 Geography of Development

2. 3 semester credit hours from the following:

- HIS 2533 Introduction to Latin American Civilization*
- HIS 2543 Introduction to Islamic Civilization*
- HIS 2553 Introduction to East Asian Civilization*
- HIS 2563 Introduction to European Civilization
- HIS 2573 Introduction to African Civilization*
- HIS 2583 Introduction to South Asian Civilization*
- HIS 3213 France since 1750
- HIS 3283 Twentieth-Century Europe
HIS 3303 History of Mexico
HIS 3353 Latin America since Independence
HIS 3523 European Cultural History
HIS 3823 History of American Foreign Policy
IDS 2213 World Civilization since the Fifteenth Century*

3. 3 semester credit hours from the following:

POL 2603 International Politics
POL 2633 Comparative Politics
POL 3393 Latin American Politics
POL 3403 European Politics
POL 3433 Governments and Politics of Southeast Asia
POL 3443 Governments and Politics of East Asia
POL 3453 The Politics of Mexico
POL 3493 Politics of the Middle East
POL 3563 Current Issues in World Politics

C. It is strongly recommended that students combine options available in the Core Curriculum to accommodate as many hours of foreign language study as possible in the 120-semester-credit-hour program.

D. 6 semester credit hours of electives from outside the College of Business

Bachelor of Business Administration Degree in Management with a Small Business and Entrepreneurship Concentration

The minimum number of semester credit hours required for this degree is 120.

All candidates seeking this degree must fulfill the Core Curriculum requirements, the Common Body of Knowledge (CBK) requirements, and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Business Administration degree in Management with a Small Business and Entrepreneurship Concentration must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

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**Common Body of Knowledge (CBK)**

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</table>

In addition to the Core Curriculum requirements and requirements from the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete the following degree requirements.
Degree Requirements

A. 15 semester credit hours of required courses in the College of Business:

- MGT 3023 Understanding People and Organizations
- MGT 3613 Managing Human Resources
- MGT 4873 Entrepreneurship
- MGT 4883 Managing Small Businesses
- MGT 4943 Managing Effective Teams and Resolving Conflict

B. 6 semester credit hours of support work within the College of Business

C. 6 semester credit hours of support work from the following:

- COM 2113 Public Speaking
- COM 2213 Foundations of Communication
- COM 3623 Commercial Publications
- COM 3633 Professional Presentation
- COM 3523 Public Relations
- ENG 2413 Technical Writing

D. 3 semester credit hours of upper-division electives from outside the College of Business.

E. 3 semester credit hours of practicum:

- MGT 4903 Practicum in Small Business

Bachelor of Business Administration Degree in Human Resource Management

The minimum number of semester credit hours required for this degree is 120.

All candidates seeking this degree must fulfill the Core Curriculum requirements, the Common Body of Knowledge (CBK) requirements, and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Business Administration degree in Human Resource Management must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

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ENG 1023 Discourse across the Disciplines |
Common Body of Knowledge (CBK)

All students seeking a B.B.A. degree in the College of Business must complete the following Common Body of Knowledge (CBK) courses in addition to the Core Curriculum.

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<td>MKT 3013 Principles of Marketing</td>
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<tr>
<td>MS 3033 Management Science and Production Management</td>
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</tbody>
</table>
In addition to the Core Curriculum Requirements and requirements from the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete the following degree requirements.

**Degree Requirements**

A. 15 upper-division semester credit hours in the major:

- MGT 3613 Managing Human Resources
- MGT 4613 Compensating Employees
- MGT 4623 Staffing Organizations
- MGT 4663 Training and Developing Employees
- MGT 4803 Strategic Human Resource Management

B. 9 additional semester credit hours of human resource electives chosen from the following:

- MGT 3023 Understanding People and Organizations
- MGT 3123 Organizational Communication
- MGT 3253 Interpersonal Communication
- MGT 3803 Strategic Management of Nonprofit Organizations
- MGT 4213 Designing Organizations
- MGT 4643 Human Resources Law
- MGT 4813 Current Topics in Human Resource Management
- MGT 4633 Labor Relations
- MGT 4923 Leading Organizations and Making Decisions
- MGT 4953 Special Studies in Management

To substitute another course for one of these human resource electives, a student must submit a petition to the Undergraduate Business Advising Office and receive approval from a Human Resource Management full-time faculty member before registering for the course.

C. 6 semester credit hours of support work:

- COM 2113 Public Speaking
- ENG 2413 Technical Writing

D. 3 semester credit hours from outside the College of Business from the following:

- POL 3703 Personnel Administration in the Public Sector
- PSY 3203 Industrial and Organizational Psychology
- SOC 3193 The Sociology of Work and Occupations

To substitute another course for a support work course, a student must submit a petition to the Undergraduate Business Advising Office and receive approval from a Human Resource Management full-time faculty member before registering for the course.

**Minor in International Management**

The Minor in International Management is for nonbusiness majors only. All students pursuing the minor must take the following 18 semester hours:

- ECO 2003 Introduction to Political Economy*
  or
- ECO 2013 Introductory Macroeconomics*
MGT 3013 Introduction to Organization Theory, Behavior, and Management
MKT 3013 Principles of Marketing
MKT 4073 International Marketing
MGT 4073 International Management
MGT 4083 Comparative International Management Practices
(* may be used to satisfy the core curriculum requirement)

Minor in Management

All students pursuing the minor must complete 18 semester credit hours.

A. 9 semester credit hours of required courses:
   MGT 3013 Introduction to Organization Theory, Behavior, and Management
   MGT 3023 Understanding People and Organizations
   MGT 3043 Business Communication and Professional Development

B. 9 semester credit hours of upper-division Management courses.

To declare a Minor in Management, obtain advice, and seek approval of substitutions for course requirements, students must consult the Undergraduate Business Advising Office.

COURSE DESCRIPTIONS

MANAGEMENT
(MGT)

2003 Introduction to Business
   (3-0) 3 hours credit.
   This course provides a conceptual overview of the dynamics of business and explores the elements of business operations as well as the ways owners can cope with opportunities and challenges.

2033 Management Applications for Personal Computing
   (3-0) 3 hours credit.
   The application of personal-computer-based software to business problem-solving. The course aids the student in developing business applications for existing software that address applied problems in the modern workplace. Application areas may include health care management, human resource management, operations management, small business management, marketing, and tourism management. Application topics will be drawn from issues and problems across all areas. Application software may include spreadsheets, databases, multimedia presentation software, graphics programs, and Internet access.

3013 Introduction to Organization Theory, Behavior, and Management
   (3-0) 3 hours credit.
   A study of the complex role managers play in creating and maintaining organizations. Organization theory and behavior are explored within the context of changing technological, social, and political/legal environments and the internationalization of the economy. Some introduction to strategic analysis, planning, and decision making. Attention is given to the ethical dimensions of management and social responsibility.

3023 Understanding People and Organizations
   (3-0) 3 hours credit. Prerequisite: MGT 3013.
   A critical examination of behavioral theory as it relates to the management of individuals, dyads, and groups in organizations. Investigation of the organization as an open system of tasks, structures, tools, and people in states of continuous change.
3043  **Business Communication and Professional Development**  
(3-0) 3 hours credit. Prerequisites: COM 1043 or COM 1053, and ENG 1023.  
This course examines basic interpersonal communication processes within written and oral channels, with practical applications for the business environment. Issues regarding cross-cultural communications and ethical considerations in business communication are discussed. The course emphasizes three areas: 1) planning, researching, organizing, writing, editing, and revising business-related documents; 2) planning, organizing, and delivering oral presentations in a business setting; and 3) preparing for professional success in the business world, including career planning, networking, job searching, resume preparation, and job application and interviewing. Written assignments and oral presentations are required.

3123  **Organizational Communication**  
(3-0) 3 hours credit. Prerequisites: MGT 3013 and MGT 3023.  
Theory and research in organizational communication. The course will examine the barriers to effective organizational communication; group communication and decision-making; information flows through the formal and informal networks of organizations. The course will also stress the means of evaluating organizational communication effectiveness. (Same as COM 3893. Credit cannot be earned for both MGT 3123 and COM 3893.)

3253  **Interpersonal Communication**  
(3-0) 3 hours credit. Prerequisite: MGT 3043.  
Theory and research of communication in personal and professional settings. The course stresses the social context of communication and emphasizes skills, knowledge and motivation of verbal and nonverbal interactions. (Same as COM 3383. Credit cannot be earned for both MGT 3253 and COM 3383.)

3613  **Managing Human Resources**  
(3-0) 3 hours credit. Prerequisite: MGT 3013.  
Analysis of how organizations attract, motivate, develop, and retain employees, and how they interact with organizations representing employees. Designed to provide students with an opportunity to understand the functional areas of human resource management and the integration of these functions into an effective and efficient human resource management system.

3803  **Strategic Management of Nonprofit Organizations**  
(3-0) 3 hours credit.  
Analysis of administrative structure, decision-making, and program delivery for nonprofit organizations. Includes management of agency operations in areas of leadership, strategic planning, staffing, personnel selection and policies, volunteers, boards, and community relations.

4073  **International Management**  
(3-0) 3 hours credit. Prerequisite: MGT 3013.  
Management in a multinational context. The study of international business strategy, structure, organization options, staffing, communications, cultural dimensions, and different countries’ objectives and political and legal frameworks. Emphasis on thinking globally and competitively.

4083  **Comparative International Management Practices**  
(3-0) 3 hours credit. Prerequisite: MGT 3013.  
The study of management practices of other countries, including their cultural, social, political and legal, and industrial economic perspectives. Emphasis on different international regions at different times and their impact on American and global management practices.

4203  **Business and Society**  
(3-0) 3 hours credit.  
A study of the impact of societal influences on the business decision-making process. Special attention given to business-government relationships and the role of the organization in the community.
4213 **Designing Organizations**  
(3-0) 3 hours credit. Prerequisites: MGT 3013, MGT 3023, and MGT 3043.  
Study of the antecedents and consequences of organizational design and structure. Emphasis on the implications for managing behavior in a rapidly changing, global environment.

4613 **Compensating Employees**  
(3-0) 3 hours credit. Prerequisite: MGT 3613 or consent of instructor.  
Analyzing, developing, implementing, administering, and performing ongoing evaluation of a total compensation and benefits system for all employee groups consistent with organizational goals. (Formerly MGT 3623. Credit cannot be earned for both MGT 3623 and MGT 4613.)

4623 **Staffing Organizations**  
(3-0) 3 hours credit. Prerequisite: MGT 3613.  
Planning, developing, implementing, administering, and performing ongoing evaluation of recruiting, hiring, orientation, and organizational exit to ensure that the workforce will meet the organization's goals and objectives.

4633 **Labor Relations**  
(3-0) 3 hours credit. Prerequisite: MGT 3613.  
The process of analyzing, developing, implementing, administering, and performing ongoing evaluation of the workplace relationship between employer and employee (including the collective bargaining process and union relations), in order to maintain effective relationships and working conditions that balance the employer's needs with the employees' rights in support of the organization's strategic objectives.

4643 **Human Resources Law**  
(3-0) 3 hours credit. Prerequisite: BLW 3013.  
An analysis of historical and contemporary laws in the United States that affect the human resource management function. Integration of labor and employment law with the social and economic forces shaping the current labor-management environment.

4663 **Training and Developing Employees**  
(3-0) 3 hours credit. Prerequisite: MGT 3613.  
The processes of ensuring that the skills, knowledge, abilities, and performance of the workforce meet the current and future organizational and individual needs through developing, implementing, and evaluating activities and programs addressing employee training and development, change and performance management, and the unique needs of particular employee groups.

4803 **Strategic Human Resources Management**  
(3-0) 3 hours credit. Prerequisites: MGT 3613, and one of the following: MGT 4613, MGT 4263, or MGT 4663.  
Analysis of how human resource management might aid in developing competitive advantage and what might be done to fulfill this potential. Emphasis is on the processes and activities used to formulate HR objectives, practices, and policies to meet the short-range and long-range organizational needs and opportunities, to guide and lead the change process, and to evaluate the contributions of human resources to organizational effectiveness.

4813 **Current Topics in Human Resource Management**  
(3-0) 3 hours credit. Prerequisite: Consent of Instructor.  
Critical analysis of current trends in human resources management theory, research, and practice. Emphasis on the analysis, synthesis, and evaluation of contemporary human resource management issues. May be repeated for credit when topics vary.

4873 **Entrepreneurship**  
(3-0) 3 hours credit.  
Examines how and why entrepreneurs develop and/or grow a business as facilitated by the objectives and resources of the entrepreneur. Topics include new ventures, acquisitions, strategy formulation, growth, and unique ways in which the development of a sustainable competitive advantage can be achieved in small business.
4883 Small Business Management
(3-0) 3 hours credit. Prerequisites: MGT 3013 and MKT 3013.
Focuses on the operation of small businesses. Analyzes 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 Management Strategy and Policy
(3-0) 3 hours credit. Prerequisites: MGT 3043; College of Business declared major in semester of graduation; permission given through Undergraduate Business Advising Office before registration.
A study of the processes involved in the formulation and implementation of policy and strategy in realistic organizational settings. Students are required to integrate their functional knowledge with the social, political, ethical, technological, and international dimensions of managerial decision making and relate it to problems concerning the relationship between the total organization and its environment. Creative analytical skills and effective communication in light of current management thinking are emphasized.

4903 Practicum in Small Business
3 hours credit. Prerequisite: Permission from the Instructor.
This practicum within the concentration will allow students to gain valuable experience in the field. Drawing upon the resources of the Small Business Development Centers, the practicum facilitates an integrative experience through interaction with entrepreneurs and small business owners. Students engage in research projects, examining relevant issues and problems that entrepreneurs confront. (Practicum is repeated for a total of 6 semester credit hours.)

4913 Independent Study
3 hours credit. Prerequisite: Permission in writing from the instructor, the Department Chair, and the Dean of the College of Business. See Undergraduate Business Advising Office for required forms.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 semester credit hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4923 Leading Organizations and Making Decisions
(3-0) 3 hours credit. Prerequisite: MGT 3013 or permission of instructor.
This is an advanced course focusing on traditional and contemporary perspectives on leadership. Because the leader is seen as a decision-maker, individual and organizational issues surrounding effective decision-making are also addressed in detail.

4933 Internship in Management
3 hours credit. Prerequisites: 2.5 grade point average, 9 semester credit hours of management courses, and permission in writing from the instructor, the Department Chair, and the Dean of the College of Business. See Undergraduate Business Advising Office for additional requirements and required forms.
The opportunity for managerial work experience. Requires a semester-long experience in private business or a public agency and a written component. Opportunities and output requirements are developed in consultation with a faculty advisor and the Department Chair and require approval of both. Internship may be repeated once (for a total of 6 semester credit hours), provided the internships are with different organizations.

4943 Managing Effective Teams and Resolving Conflict
(3-0) 3 hours credit. Prerequisites: MGT 3013 and MGT 3023 or consent of Instructor.
This is an advanced course focused on building the skills necessary to work effectively as part of a team. Conflict resolution techniques and effective negotiation techniques are examined in detail.

4953 Special Studies in Management
(3-0) 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 may be repeated for credit when the topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.
4993 Honors Thesis
3 hours credit. Prerequisite: Enrollment limited to students applying for Honors in Management (see page 57).
Supervised research and preparation of an honors thesis. May be repeated once for credit with advisor’s approval.

COURSE DESCRIPTIONS
BUSINESS LAW
(BLW)

3003 Business in Its Legal Environment
(3-0) 3 hours credit. This course may be taken in lieu of BLW 3013.
Study of the legal environment of business, including the social and ethical responsibility of business, legal
process concepts, case law and legislative jurisprudence, and constitutional perspectives of doing business.
Credit cannot be earned for both BLW 3003 and BLW 3013.

3013 Business Law
(3-0) 3 hours credit.
Legal analysis of contemporary environment of business law including the common law, legal reasoning, court
systems and procedure, constitutional law, torts, contracts and corresponding areas of Article 2 of the Uniform
Commercial Code, agency, property, bailment, international law, and related jurisprudential topics in light of
social, ethical, political, economic, and global perspectives. Credit cannot be earned for both BLW 3013 and
BLW 3003.

3023 Business Organizations and Commercial Law
(3-0) 3 hours credit. Prerequisite: BLW 3013 or the equivalent.
A detailed legal analysis of the Uniform Commercial Code, including sales, commercial paper, bank deposits
and collections, electronic transfer funds, letters of credit, secured transactions, and creditors’ remedies. This
course may also include a discussion of the Bankruptcy Act, the legal analysis of the Uniform Partnership Act,
and the Business Corporations Act.

3523 Real Estate Law
(3-0) 3 hours credit. Prerequisite: BLW 3013 or the equivalent.
Legal environment of real property ownership and 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; and equal opportunity and community reinvestment.

4153 Tourism Law
(3-0) 3 hours credit. Prerequisite: BLW 3013 or the equivalent.
An investigation of the legal aspects of the accommodation, attraction, destination management organization,
restaurant, and transportation industries.

4913 Independent Study
3 hours credit. Prerequisite: Permission in writing from the instructor, the Department Chair, and the Dean of the
College of Business. See Undergraduate Business Advising Office for required forms.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be
repeated for credit, but not more than 6 semester credit hours of independent study, regardless of discipline, will
apply to a bachelor’s degree.

4953 Special Studies in Business Law
(3-0) 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 may be repeated for credit when the topics vary, but not more than 6
semester credit hours, regardless of discipline, will apply to a bachelor’s degree.
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 or graduate degree in one of the disciplines offered by UTSA.

Credit for military science courses may be applied toward a baccalaureate degree, but mainly as free electives. Each major stipulates a maximum number of hours of military science that may be applied toward the degree requirements. Credit for military science courses awarded by another accredited college or university is accepted by UTSA as credit, within the same limitations as military science credit earned at UTSA.

Four-Year Program: This program consists of 18 semester credit 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 in the same manner as for other UTSA courses. The Basic Course consists of the first- and second-year courses: MSC 1011, 1021, 2012, and 2022, which are designed for beginning students who want to qualify for entry into the Advanced Course and those who may want to try military science without obligations. A number of popular and challenging extracurricular activities are associated with these courses. Students can qualify for entry into the Advanced Course by completing the Leader’s Training Course, the paid summer internship.

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.

Two-Year Program: This program consists of the Advanced Course, which incorporates the last two years of the Four-Year Program. The Advanced Course consists of MSC 3013, 3023, 4013, and 4023. It is open only to students who have completed the Basic Course or earned placement credit. The Advanced Course is designed to qualify a student for a commission as an officer in the United States Army. Students must complete all military science courses numbered greater than 3000 and the five-week paid National Advanced Leadership Camp in the summer, usually between the junior and senior years. Courses must be taken in sequence unless otherwise approved by the professor of military science. Students receive a stipend each month during the school year.

The Army ROTC program offers competitive scholarships for up to four years to select students. These scholarships provide 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.

All students enrolled in ROTC classes will be required to participate in physical fitness training and to take the Army Physical Fitness 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:

A. Basic Course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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<tbody>
<tr>
<td>MSC 1011</td>
<td>Introduction to Army ROTC</td>
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<tr>
<td>MSC 1021</td>
<td>Introduction to Leadership</td>
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<tr>
<td>MSC 2012</td>
<td>Self/Team Development</td>
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<tr>
<td>MSC 2022</td>
<td>Individual/Team Military Tactics</td>
</tr>
</tbody>
</table>
B. Advanced Course:

MSC 3013  Leading Small Organizations I
MSC 3023  Leading Small Organizations II
MSC 4013  Leadership Challenges and Goal-Setting
MSC 4023  Transition to Lieutenant

COURSE DESCRIPTIONS
MILITARY SCIENCE
(MSC)

1011  Introduction to Army ROTC
(1-2) 1 hour credit.
Increase self-confidence through team study and activities in basic drill, physical fitness, rappelling, leadership reaction course, first aid, making presentations, and basic marksmanship. Learn fundamental concepts of professional leadership in classroom and outdoor laboratory environments. One hour and a required leadership lab plus participation in a one-hour session for physical fitness.

1021  Introduction to Leadership
(1-2) 1 hour credit.
Learn and apply principles of effective leading. Reinforce self-confidence through participation in physically and mentally challenging exercises with upper-division ROTC students. Develop communication skills to improve individual performance and group interaction. Relate organizational ethical values to leadership effectiveness. One hour and a required leadership lab plus participation in a one-hour session for physical fitness.

2012  Self/Team Development
(2-2) 2 hours credit.
Learn and apply ethics-based skills that develop individual abilities and contribute to building effective teams of people. Develop skills in oral presentations, concise writing, event planning, coordinating group efforts, advanced first aid, land navigation, and basic military tactics. Learn fundamentals of the ROTC’s Leadership Development Program. Two hours and a required leadership lab plus required participation in two one-hour sessions for physical fitness.

2022  Individual/Team Military Tactics
(2-2) 2 hours credit.
Introduction to individual and team aspects of military tactics in small unit operations. Includes use of radio communications, making safety assessments, movement techniques, planning for team safety and security and methods of pre-execution checks. Practical exercises with upper-division ROTC students. Learn techniques for training others as an aspect of continued leadership development. Two hours and a required leadership lab plus required participation in two one-hour sessions for physical fitness.

3013  Leading Small Organizations I
(3-2) 3 hours credit. Prerequisites: MSC 1011, MSC 1021, MSC 2012, and MSC 2022, or consent of instructor.
Series of practical opportunities to lead small groups, receive personal assessments and encouragement, and lead in increasingly complex situations. Uses small unit tactics and opportunities to plan and conduct training for lower-division students both to develop such skills and as vehicles for practicing leading. Three hours and a required leadership lab plus required participation in three one-hour sessions for physical fitness. Participation in one weekend exercise is required; one or two optional weekend exercises may also be offered.
3023 Leading Small Organizations II
(3-2) 3 hours credit. Prerequisite: MSC 3013 or consent of instructor.
Continues methodology of MSC 3013. Students will analyze tasks and prepare written or oral guidance for team members to accomplish tasks. Students will also delegate tasks and supervise; plan for and adapt to the unexpected in organizations under stress; examine and apply lessons from leadership case studies; and examine the importance of ethical decision making in setting a positive climate that enhances team performance. Three hours and a required leadership lab plus required participation in three one-hour sessions for physical fitness. Participation in one weekend exercise is required; one or two optional weekend exercises may also be offered.

4013 Leadership Challenges and Goal-Setting
(3-2) 3 hours credit. Prerequisite: MSC 3023 or consent of instructor.
Students will plan, conduct, and evaluate activities of the ROTC cadet organization; articulate goals and put plans into action; assess organizational cohesion and develop strategies to improve it; develop confidence in leadership skills and resource management; learn and apply various Army policies and programs. Three hours and a required leadership lab plus required participation in three one-hour sessions for physical fitness. Participation in one weekend exercise is required; one or two optional weekend exercises may also be offered.

4023 Transition to Lieutenant
(3-2) 3 hours credit. Prerequisite: MSC 4013 or consent of instructor.
Continues the methodology from MSC 4013. Students will identify and resolve ethical dilemmas; refine counseling and motivating techniques; examine tradition and law as related to leadership as an Army officer; prepare for a future as a successful Army lieutenant. Three hours and a required leadership lab plus required participation in three one-hour sessions for physical fitness. Participation in one weekend exercise is required; one or two optional weekend exercises may also be offered.

4033 Practical Leadership
(3-0) 3 hours credit. Prerequisite: MSC 4023 or consent of instructor.
Performance-oriented instruction and preparation for commissioning. Additional development of students' ability to plan, coordinate, and direct the efforts of Army small-unit organizations in the execution of tactical missions; planning and execution of leadership laboratories.
DEPARTMENT OF MANAGEMENT SCIENCE AND STATISTICS

The disciplines of Management Science and Statistics are integral to modern decision-making processes. These interdisciplinary fields emphasize the use of quantitative methods and computers for analyzing, understanding, visualizing, and interpreting data. Management Science seeks to provide a rational basis for decision analysis across a broad spectrum of business functions such as production, service, logistics, and supply chain management. Statistical methods provide analytical tools for research in high-technology and biomedical industries, insurance, and government agencies. Both disciplines offer the opportunity to pursue advanced graduate studies. The Department of Management Science and Statistics offers a Bachelor of Business Administration Degree in Management Science and a Bachelor of Science Degree in Statistics. The department also offers minors in Applied Statistics and Management Science.

Bachelor of Business Administration Degree in Management Science

Management science is a general discipline that supports and supplements human decision-making abilities. It uses mathematics, statistics and computers for the purpose of analyzing, understanding, visualizing, and interpreting data. It seeks to provide a rational basis for decision analysis across a broad spectrum of decision problems. The minimum number of semester credit hours required for the Bachelor of Business Administration degree in Management Science is 120.

All candidates seeking this degree must fulfill the Core Curriculum requirements, the Common Body of Knowledge (CBK) requirements, and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Business Administration degree in Management Science must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
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<tbody>
<tr>
<td>Rhetoric (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement:</td>
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<tr>
<td></td>
<td>ENG 1013 Freshman Composition</td>
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<td>ENG 1023 Discourse across the Disciplines</td>
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<tr>
<td>Domain I: Mathematics and Science</td>
<td>Mathematics (3 semester credit hours)</td>
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<td>MAT 1033 Algebra with Calculus for Business</td>
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<td>Science (6 semester credit hours)</td>
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<td>Three hours from Level One and three hours from Level Two under the appropriate sections in the list of core courses will satisfy this core requirement.</td>
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<tr>
<td>Domain II: Society and Culture</td>
<td>United States History and Diversity (6 semester credit hours)</td>
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<td>Any six hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<tr>
<td></td>
<td>Political Studies (6 semester credit hours)</td>
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<td>POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<tr>
<td></td>
<td>Social and Behavioral Sciences (3 semester credit hours)</td>
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<tr>
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<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td>Economics (3 semester credit hours)</td>
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<td>ECO 2013 Introductory Macroeconomics</td>
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Common Body of Knowledge (CBK)

All students seeking a B.B.A. degree in the College of Business must complete the following Common Body of Knowledge (CBK) courses in addition to the Core Curriculum.

<table>
<thead>
<tr>
<th>Course or Requirement</th>
<th>Semester Credit Hours</th>
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<tr>
<td>ACC 2013 Principles of Accounting I</td>
<td>3</td>
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<tr>
<td>ACC 2033 Principles of Accounting II</td>
<td>3</td>
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<tr>
<td>BLW 3013 Business Law</td>
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<tr>
<td>COM 1053 Business and Professional Speech</td>
<td>3</td>
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<tr>
<td>ECO 2013 Introductory Microeconomics (Domain II)</td>
<td>3</td>
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<tr>
<td>ECO 2023 Introductory Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>FIN 3013 Principles of Business Finance</td>
<td>3</td>
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<tr>
<td>GBA 2013 Social and Ethical Issues in Business</td>
<td>3</td>
</tr>
<tr>
<td>IS 1403 Business Information Systems Fluency</td>
<td>3</td>
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<tr>
<td>IS 3003 Principles of Information Systems for Management</td>
<td>3</td>
</tr>
<tr>
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</table>
In addition to the Core Curriculum requirements and requirements from the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete the following degree requirements.

Degree Requirements

A. 9 semester credit hours of required management science courses:

MS 3063 Decision Support Systems
MS 4323 Simulation Applications in Business
MS 4343 Production/Operations Management

B. 15 semester credit hours of business upper-division electives chosen from the following:

A minimum of 6 hours must be management science courses

MS 3313 Statistical Applications in Business
MS 3403 Logistics Management
MS 4353 Service Operations Management
MS 4363 Quality Management and Control
MS 4373 Applied Computer Modeling in Logistics
MS 4543 Supply Chain Management
MS 4573 Management Science Applications in Business
MS 4583 Current Technology: Issues for Business
MS 4913 Independent Study in Management Science
MS 4933 Internship in Management Science
MS 4953 Special Studies in Management Science
MG 3613 Managing Human Resourcefulness
FIN 4873 Computer Modeling of Financial Applications
MKT 3083 Marketing Research

To substitute another course for one of the above electives, a student should submit a petition to the Undergraduate Business Advising Office and receive approval from any management science full-time faculty member before registering for the course.

C. 9 semester credit hours of electives taken outside the College of Business.

Minor in Management Science

All students pursuing the minor must complete 18 semester credit hours.

A. 6 semester credit hours of the following courses:

MS 3033 Management Science and Production Management
MS 4343 Production/Operations Management

B. 12 semester credit hours of business upper-division electives chosen from the following:

MS 3063 Decision Support Systems for Management
MS 3313 Statistical Applications in Business
MS 3403 Logistics Management
MS 4323 Simulation Applications in Business
MS 4353 Service Operations Management
MS 4363 Quality Management and Control
To substitute another course for one of the above electives, a student should submit a petition to the Undergraduate Business Advising Office and receive approval from any management science full-time faculty member before registering for the course.

**COURSE DESCRIPTIONS**

**MANAGEMENT SCIENCE (MS)**

**1013  Quantitative Methods for Business and Economics**
(3-0) 3 hours credit. Prerequisite: MAT 1033.
A survey of basic statistical techniques for business and economics. As part of the business core, the course focuses on the applications of primary statistical concepts in a business-oriented environment. Various statistical and mathematical techniques will be presented to assist in solving problems encountered by corporate managers. Topics include but are not limited to descriptive statistics, discrete and continuous probability functions, sampling, experimental design, interval estimation, hypothesis testing, test of independence, and regression analysis. (Formerly GBA 1013. Credit cannot be earned for both MS 1013 and GBA 1013.)

**3033  Management Science and Production Management**
(3-0) 3 hours credit. Prerequisites: MAT 1033 and MS 1013.
An introductory course in management science and production operations management. This course emphasizes model building as a foundation for rational decision-making and problem solving. Techniques such as linear programming, forecasting, decision theory, inventory models, project scheduling, and simulation are covered. Computer software is used to apply these techniques in the analysis of a wide variety of decision problems. (Formerly MGT 3033. Credit cannot be earned for both MS 3033 and MGT 3033.)

**3063  Decision Support Systems**
(3-0) 3 hours credit.
A study of the modern computer hardware and software currently used in managerial and personal/professional decision processes. Topics include expert systems, artificial intelligence, and communication networks. Emphasis is given to the concept of decision support systems and to hands-on experience using techniques and microcomputer tools to build systems that can support decision processes. (Formerly MGT 3063. Credit cannot be earned for both MS 3063 and MGT 3063.)

**3313  Statistical Applications in Business**
(3-0) 3 hours credit.
Emphasizes application of statistics in problem-solving situations involving management, marketing, human resources, finance, and operations management. Useful techniques include analysis of variance, simple and multiple regression, chi-square distribution, nonparametric tests, times series and forecasting, and quality control. Students use computer software such as SPSS or SAS in their analyses. (Formerly MGT 3313. Credit cannot be earned for both MS 3313 and MGT 3313.)
3403 Logistics Management (3-0) 3 hours credit.  
The study of logistic functions of business involved in the movement and storage of supplies, work-in-progress and finished goods. The trade-off between cost and service and the purchase and supply of raw materials; the warehousing and control of inventory; industrial packaging; materials handling within warehouses; and the distribution of finished goods to customers required to minimize costs, maximize profits or increase customer service levels. The concept, value and current progress of supply chain management, and the logistics management in the (Internet) electronic commerce era will also be addressed.

4323 Simulation Applications in Business (3-0) 3 hours credit. Prerequisite: M S 3033.  
A study of the techniques for modeling and analysis of business processes using computer simulation and animation. Selected example applications from supply chain management, financial, marketing, and operations functions. Emphasis on the use of computer simulation in support of the management decision process. (Formerly MGT 4323. Credit cannot be earned for both MS 4323 and MGT 4323.)

4343 Production/Operations Management (3-0) 3 hours credit. Prerequisite: M S 3033.  
A study of the production and operations management function in business. Review of the methods required for design, operation, and improvement of the systems that create products or services. Traditional topics in manufacturing and service organizations are investigated including an introduction to supply chain management concepts. (Formerly MGT 4343. Credit cannot be earned for both MS 4343 and MGT 4343.)

4353 Service Operations Management (3-0) 3 hours credit. Prerequisite: M S 3033.  
The operations methods, practices, and tools required for managing service industries. Emphasis of decision analysis and actions is focused on the customer. The role of services in society, information technologies, and the uniqueness of service delivery systems are stressed.

4363 Quality Management and Control (3-0) 3 hours credit. Prerequisite: M S 3033.  
Investigates the fundamental nature of quality and its implications for business. Topics include statistical methods for quality improvement in manufacturing and service operations. Emphasis given to both the technical and managerial issues in understanding and implementing quality as a component for success in today's global business environment. (Formerly MGT 4363. Credit cannot be earned for both MS 4363 and MGT 4363.)

4373 Applied Computer Modeling in Logistics (3-0) 3 hours credit. Prerequisite: M S 3033.  
This course is the study of current computer tools available to the execution, planning and strategy decisions in logistics and transportation management. Individual software modules related to communications (EDI & Internet), demand management and forecasting, master production scheduling, DRP, MRP & MRP II, inventory policy decisions, supply chain network and facility locations, warehouse storage and material handling, transportation rating and costing, vehicle routing and scheduling are the core subjects of discussions. When available, an integrated software approach such as supply chain management (SCM) and enterprise resource planning (ERP) by SAP, Oracle or 12 will be adopted. The goal of the course is to prepare the students to be capable of making effective logistics decisions recognizing the rise of e-commerce and integrated corporate information systems.

4543 Supply Chain Management (3-0) 3 hours credit. Prerequisite: M S 3033 or its equivalent.  
Principles, techniques and practices of supply chain management. The focus is on the coordination and information management that integrates supplier selection, purchasing, transportation, inventory and warehousing, production and distribution from procurement of raw material to customer satisfaction. Decision models and techniques in facility location, production, inventory and transportation are presented. Currently available software will be surveyed and cases of successful implementations will be analyzed.
Management Science Applications in Business (MGT 4573)
3 hours credit. Prerequisite: MGT 3033.
The application of decision analysis to problems from a wide variety of business disciplines. Emphasis is on providing students with capabilities for applying management science techniques to problems from their own areas of interest. (Formerly MGT 4573. Credit cannot be earned for both MGT 4573 and MGT 4573.)

Current Technology: Issues for Business (MGT 4583)
3 hours credit. Prerequisite: MGT 3033.
Survey of state-of-the-art technology in today’s organizations from a sociotechnical perspective. Topics include manufacturing systems, expert systems, artificial intelligence, office automation, and microcomputer systems and networks. Emphasis is on examining the social dimensions and effects of technologies and on exploring future trends and consequences. (Formerly MGT 4583. Credit cannot be earned for both MGT 4583 and MGT 4583.)

Independent Study in Management Science (MGT 4913)
3 hours credit. Prerequisite: Permission in writing from the instructor, the Department Chair, and the Dean of the College of Business. See Undergraduate Business Advising Office for required forms and additional requirements.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

Internship in Management Science (MGT 4933)
3 hours credit. Prerequisites: 2.5 grade point average and permission in writing from the instructor, the Department Chair, and the Dean of the College of Business. See Undergraduate Business Advising Office for required forms and additional requirements.
Supervised full- or part-time work experience in management science. Offers opportunities for applying management science in private businesses or public agencies. May be repeated for credit, but not more than 6 semester credit hours will apply to a bachelor’s degree.

Special Studies in Management Science (MGT 4953)
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 may be repeated for credit when the topics vary.

Bachelor of Science Degree in Statistics
Statistics is a science that deals with principles and procedures for obtaining and processing information in order to make decisions in the face of uncertainty. In particular, it deals with collection, organization, analysis, and interpretation of numerical information to answer questions in almost every aspect of modern day life. Statistical methods are used to address complex questions common in business, government, and science. Employers such as research divisions in pharmaceutical companies, clinical research units at medical centers, quality control or reliability departments in manufacturing companies, corporate planning and financial analysis units, and government agencies require persons with advance quantitative skills. The Bachelor of Science Degree in Statistics provides students with access to such skills preparing them for careers as statistical analysts or for further graduate academic training.

Core Curriculum requirements: Students seeking the Bachelor of Science Degree in Statistics must fulfill University Core Curriculum requirements. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.
Degree Requirements

A. 31-32 semester credit hours of required courses in the computational, mathematical, or statistical sciences:

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rhetoric (6 semester credit hours)</strong></td>
<td>All students must take the following six hours to meet this core requirement:</td>
</tr>
<tr>
<td></td>
<td>ENG 1013 Freshman Composition</td>
</tr>
<tr>
<td></td>
<td>ENG 1023 Discourse across the Disciplines</td>
</tr>
<tr>
<td><strong>Domain I: Mathematics and Science</strong></td>
<td><strong>Mathematics (3 semester credit hours)</strong></td>
</tr>
<tr>
<td></td>
<td>This requirement can be satisfied with MAT 1214 for statistics majors (Students not prepared to begin MAT 1214 must take MAT 1093 Precalculus.)</td>
</tr>
<tr>
<td></td>
<td><strong>Science (6 semester credit hours)</strong></td>
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<tr>
<td></td>
<td>Three hours from Level One and three hours from Level Two under the appropriate sections in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td><strong>Domain II: Society and Culture</strong></td>
<td><strong>United States History and Diversity (6 semester credit hours)</strong></td>
</tr>
<tr>
<td></td>
<td>Any six hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td><strong>Political Studies (6 semester credit hours)</strong></td>
</tr>
<tr>
<td></td>
<td>POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td><strong>Social and Behavioral Sciences (3 semester credit hours)</strong></td>
</tr>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td><strong>Economics (3 semester credit hours)</strong></td>
</tr>
<tr>
<td></td>
<td>ECO 2013 Introductory Macroeconomics</td>
</tr>
<tr>
<td><strong>Domain III: Literature and the Arts</strong></td>
<td><strong>Literature (3 semester credit hours)</strong></td>
</tr>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td><strong>The Arts (3 semester credit hours)</strong></td>
</tr>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td><strong>Domain IV: Interdisciplinary Studies</strong></td>
<td>(3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

| CS 1073 | Introductory Computer Programming for Scientific Applications, or |
| CS 1713, 1711 | Introduction to Computer Science and Recitation, or |
| CS 2073 | Computer Programming with Engineering Applications |
| MAT 1214 | Calculus I |
| MAT 1223 | Calculus II |
| MAT 2213 | Calculus III |
MAT 3213  Foundations of Analysis
MAT 4213  Real Analysis I
STA 3513  Probability and Statistics
STA 3523  Statistical Methods

B. 18 semester credit hours in the major:

MAT 3633  Numerical Analysis
STA 3013  Multivariate Analysis for the Life and Social Sciences
STA 3433  Applied Nonparametric Statistics
STA 4133  Introductory Data Analysis with Statistical Software
STA 4713  Applied Regression Analysis
STA 4723  Design and Analysis of Experiments

C. 35-36 semester credit hours of electives:

3 semester credit hours of upper-division electives in statistics and 3 additional semester credit hours of upper-
division electives in Mathematics, Statistics, or other appropriate areas approved by the student's advisor

29-30 semester credit hours of free electives, such as courses in Business, Health, Engineering, or Psychology where
Statistics is actively applied and properly practiced

Minor in Applied Statistics

All students pursuing the Minor in Applied Statistics must complete 18 semester credit hours.

A. 6 semester credit hours of required courses from one of the following four sets of sequences:

1) STA 1053  Basic Statistics
   or
   STA 2073  Statistics for Psychology
   STA 1993  Statistical Methods for the Life and the Social Sciences

2) STA 2073  Statistics for Psychology
   PSY 3013  Psychological Measurement
   or
   POL 2703  Scope and Methods in Political Science

3) MS 1013  Quantitative Methods for Business and Economics
   MS 3313  Statistical Applications in Business

4) STA 3513  Probability and Statistics
   or
   STA 2303  Applied Probability and Statistics for Engineers
   or
   STA 3533  Probability and Random Processes
   or
   STA 3543  Statistics and Experimental Designs for Computer Science
   STA 3523  Statistical Methods
B. 9 semester credit hours selected from the following list of courses as recommended by the undergraduate advisor:

- STA 3013 Multivariate Analysis for the Life and the Social Sciences
- STA 3433 Applied Nonparametric Statistics
- STA 4133 Introductory Data Analysis with Statistical Software
- STA 4713 Applied Regression Analysis
- STA 4723 Design and Analysis of Experiments
- STA 4803 Statistical Quality Control
- or
- MAT 4803 Statistical Quality Control

C. 3 semester credit hours from the following list of courses as recommended by the undergraduate advisor:

- ECO 3123 Forecasting Techniques in Business and Economics
- MAT 3643 Stochastic Calculus
- MAT 4313 Applied Combinatorics
- ME 4723 Reliability and Quality Control in Engineering Design
- MS 4363 Quality Management and Control
- STA 3313 Introduction to Sample Survey Theory and Methods
- STA 3813 Discrete Data Analysis and Bioassay
- STA 4903 Survival Analysis
- STA 4953 Special Studies in Statistics

To substitute another course for one of the above electives, a student must submit a petition to the Undergraduate Business Advising Office and receive approval from any statistics full-time faculty member before registering for the course.

COURSE DESCRIPTIONS
STATISTICS
(STA)

1043 Introduction to Statistical Reasoning
(3-0) 3 hours credit. Prerequisite: Satisfactory performance on placement examination.
Intended primarily for liberal arts majors, this course provides an overview of statistical methods useful for judgement and decision-making under conditions of uncertainty. The emphasis of the course will be on using statistical reasoning to gain insight and draw conclusions from observations. The common pitfalls of statistical studies and common myths about the fallacies of inference will be discussed. Topics may include data analysis, inference, correlation and regression.

1053 Basic Statistics
(3-0) 3 hours credit. Prerequisite: Satisfactory performance on placement exam.
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; and applications of the chi-square distribution. [TCCN: MATH 1342.]

1993 Statistical Methods for the Life and Social Sciences
(3-0) 3 hours credit. Prerequisites: STA 1053 or STA 2073 and MAT 1023 or MAT 1033 or an equivalent course.
Point estimator properties, inference about the means and variances of two or more populations, categorical data analysis, linear regression, analysis of variance, and nonparametric tests. Open to students of all disciplines.
2073  Statistics for Psychology  
(3-0) 3 hours credit. Prerequisites: MAT 1023, MAT 1033, or MAT 1073, and one psychology course.  
The use of statistics in psychological research includes: elementary probability theory; descriptive statistics, including histograms, graphing, and measures of central tendency and dispersion; correlational techniques; binomial and normal distributions; and inferential statistics, including hypothesis testing, interval estimation, and analysis of variance. (Formerly STA 1073. Credit cannot be earned for both STA 2073 and STA 1073.)

2303  Applied Probability and Statistics for Engineers  
(3-0) 3 hours credit. Prerequisite: MAT 1223.  
Fundamental concepts of probability and statistics with practical applications to engineering problems. Emphasis on sampling, statistical inference, measurement error analysis and quantifying risk, safety and reliability in engineering design.

3013  Multivariate Analysis for the Life and Social Sciences  
(3-0) 3 hours credit. Prerequisite: STA 1993, STA 3513, or an equivalent.  
Linear algebra preliminaries, the multivariate normal distribution, tests on means, discriminant analysis, cluster analysis, principal components, and 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: One of the following: M 3313, PSY 3013, STA 1993, STA 2303, STA 3513, or STA 3543.  
Simple random sampling, stratified random sampling, ratio and regression estimates, systematic sampling, cluster sampling, unequal probability sampling, two-stage and multistage sampling, and nonsampling errors.

3433  Applied Nonparametric Statistics  
(3-0) 3 hours credit. Prerequisite: One of the following: M 3313, PSY 3013, STA 1993, STA 2303, STA 3523, or STA 3543.  
Tests of location, goodness-of-fit tests, rank tests, tests based on nominal and ordinal data for both related and independent samples, and measures of association.

3513  Probability and Statistics  
(3-0) 3 hours credit. Prerequisite: Completion of or concurrent enrollment in MAT 2213.  
Axioms of probability, functions of random variables, important discrete and continuous distributions, sampling distributions, and Central Limit Theorem.

3523  Statistical Methods  
(3-0) 3 hours credit. Prerequisite: STA 3513, STA 3533, or an equivalent.  
Point and interval estimation, hypothesis testing, and applied topics which may include chi-square tests, linear regression, and analysis of variance.

3533  Probability and Random Processes  
(3-0) 3 hours credit. Prerequisites: EE 3423 and either EE 2323 or MAT 3253.  
Probability, random variables, distribution and density functions, limit theorems, random processes, correlation functions, power spectra, and response of linear systems to random inputs.

3543  Statistics and Experimental Design for Computer Science  
(3-0) 3 hours credit. Prerequisite: MAT 1223.  
Elementary probability, random variables, binomial, Poisson, normal and exponential distributions, elementary queuing theory, sampling distributions, point and interval estimation, hypothesis tests, principles of experimentation.

3813  Discrete Data Analysis and Bioassay  
(3-0) 3 hours credit. Prerequisite: STA 1993 or STA 3523.  
Methods especially useful for problems arising in the life sciences: analysis of count data, contingency tables, and Probit and Logit analysis.
4133 Introductory Data Analysis with Statistical Software  
(3-0) 3 hours credit. Prerequisite: One of the following: MS 3313, PSY 3013, STA 1993, STA 2303, STA 3523, or STA 3543.  
This course introduces statistical analysis of data sets using modern statistical packages such as SAS, SPSS, JMP, or EXCEL. Examples will be drawn from regression analysis, analysis of variance, and multivariate methods.

4643 Introduction to Stochastic Processes  
(3-0) 3 hours credit. Prerequisite: STA 3513.  
Probability models, Poisson processes, finite Markov chains, including transition probabilities, classification of states, limit theorems, queuing theory, and birth and death processes.

4713 Applied Regression Analysis  
(3-0) 3 hours credit. Prerequisite: One of the following: MS 3313, PSY 3013, STA 1993, STA 2303, STA 3523, or STA 3543.  
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, and nonlinear regression.

4723 Design and Analysis of Experiments  
(3-0) 3 hours credit. Prerequisite: One of the following: MS 3313, PSY 3013, STA 1993, STA 2303, STA 3523, or STA 3543.  
General concepts in the design and analysis of experiments. Emphasis will be placed on both the experimental designs and analysis and tests of the validity of assumptions. Topics covered include 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 1993, STA 3513, or an equivalent.  
Statistical methods are introduced in terms of problems that arise in manufacturing and their applications to the control of manufacturing processes. Topics include control charts and acceptance sampling plans.

4903 Survival Analysis  
(3-0) 3 hours credit. Prerequisite: STA 3523 or an equivalent.  
Measures of survival, hazard function, mean residual life function, common failure distributions and a procedure for selecting an appropriate model, and the probabilistic approach to biomedical applications.

4913 Independent Study  
3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student's advisor, the Department Chair 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 semester credit hours, regardless of discipline, will apply to a bachelor's degree.

4953 Special Studies in Statistics  
(3-0) 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 may be repeated for credit when the topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor's degree.

4993 Honors Research  
3 hours credit. Prerequisites: STA 3523 and consent of instructor.  
Supervised research and preparation of an honors thesis.
DEPARTMENT OF MARKETING

The Department of Marketing offers a Bachelor of Business Administration degree in Marketing, a Bachelor of Business Administration degree in Marketing with a Tourism Concentration, and a minor in Marketing.

The marketing degree provides students with the theory and methods used by businesses to develop strategies for designing, pricing, distributing, and promoting the firm’s offerings. Courses present practical treatment of such topics as marketing strategy, customer demand analysis, market segmentation, promotion management and international marketing. Graduates can choose from a wide range of careers including marketing management, advertising, personal selling, retailing, international marketing and marketing research.

The tourism concentration provides the opportunity for a comprehensive business education that can allow students to enter into careers in the tourism and hospitality industry.

The minor in marketing provides the opportunity for students with majors in other disciplines to acquire marketing skills for application within those disciplines.

DEPARTMENT HONORS

The Department of Marketing offers the opportunity for certain of its outstanding students to achieve the designation of Honors in Marketing and provides the opportunity for advanced study under close faculty mentorship.

Selection for honors designation is based on the student’s academic performance and recommendation by the Department Undergraduate Program Committee (UPC) in consultation with the Marketing faculty. To be eligible for the designation, students must have a minimum overall grade point average of 3.0 at UTSA and a minimum grade point average of 3.5 in their major at UTSA. To enroll in honors thesis courses and to graduate with the honors designation, these minimum grade point averages must be maintained. Students applying for Honors in Marketing are expected to enroll in the appropriate honors thesis course during their final two semesters. The completed thesis must be approved by a supervising faculty sponsor in Marketing and the UPC. Students interested in this program should contact the UPC through the Department of Marketing office for additional information. Department Honors can be attained independently of and in addition to University Honors.

Bachelor of Business Administration Degree in Marketing

The minimum number of semester credit hours required for this degree is 120.

All candidates seeking this degree must fulfill the Core Curriculum requirements, the Common Body of Knowledge (CBK) requirements, and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Business Administration degree in Marketing must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhetoric (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement: ENG 1013 Freshman Composition ENG 1023 Discourse across the Disciplines</td>
</tr>
</tbody>
</table>
Common Body of Knowledge (CBK)

All students seeking a B.B.A. degree in the College of Business must complete the following Common Body of Knowledge (CBK) courses in addition to the Core Curriculum.

<table>
<thead>
<tr>
<th>Domain I: Mathematics and Science</th>
<th>Mathematics (3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MAT 1033 Algebra with Calculus for Business</td>
</tr>
<tr>
<td></td>
<td>Science (6 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Three hours from Level One and three hours from Level Two under the appropriate sections in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain II: Society and Culture</th>
<th>United States History and Diversity (6 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Any six hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td>Political Studies (6 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>POL 1013 plus additional 3 hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td>Social and Behavioral Sciences (3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td>Economics (3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>ECO 2013 Introductory Macroeconomics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain III: Literature and the Arts</th>
<th>Literature (3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
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<td></td>
<td>The Arts (3 semester credit hours)</td>
</tr>
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<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain IV: Interdisciplinary Studies</th>
<th>(3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>
In addition to the Core Curriculum requirements and requirements from the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete the following degree requirements.

Degree Requirements

A. 21 required upper-division semester credit hours in the major:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 3083</td>
<td>Marketing Research</td>
</tr>
<tr>
<td>MKT 4073</td>
<td>International Marketing</td>
</tr>
<tr>
<td>MKT 4093</td>
<td>Consumer Behavior</td>
</tr>
<tr>
<td>MKT 4893</td>
<td>Marketing Strategy</td>
</tr>
</tbody>
</table>

9 additional hours of marketing electives. Students may choose the following as one of the additional 9 hours of marketing electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 3103</td>
<td>Tourism Marketing</td>
</tr>
</tbody>
</table>

B. 3 semester credit hours of support work within the College of Business chosen from the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 3033</td>
<td>Economics of Managerial Decisions</td>
</tr>
<tr>
<td>ECO 3053</td>
<td>Aggregate Economic Analysis</td>
</tr>
<tr>
<td>IS 3053</td>
<td>Database Management for Business</td>
</tr>
<tr>
<td>IS 4153</td>
<td>Electronic Commerce</td>
</tr>
<tr>
<td>FIN 3033</td>
<td>Principles of Investment</td>
</tr>
<tr>
<td>FIN 3313</td>
<td>Money and Banking</td>
</tr>
<tr>
<td>MS 4343</td>
<td>Production/Operations Management</td>
</tr>
<tr>
<td>MS 4353</td>
<td>Service Operations Management</td>
</tr>
</tbody>
</table>

C. 9 semester credit hours outside the College of Business.

Minor in Marketing

All students pursuing the Minor in Marketing must complete 18 semester credit hours.

A. 6 semester credit hours of required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 3013</td>
<td>Principles of Marketing</td>
</tr>
<tr>
<td>MKT 4013</td>
<td>Marketing Management</td>
</tr>
</tbody>
</table>

B. 12 semester credit hours from the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 3043</td>
<td>Advertising</td>
</tr>
<tr>
<td>MKT 3083</td>
<td>Marketing Research</td>
</tr>
<tr>
<td>MKT 3113</td>
<td>Retailing</td>
</tr>
<tr>
<td>MKT 4073</td>
<td>International Marketing</td>
</tr>
<tr>
<td>MKT 4093</td>
<td>Consumer Behavior</td>
</tr>
<tr>
<td>MKT 4953</td>
<td>Special Studies in Marketing</td>
</tr>
</tbody>
</table>
Bachelor of Business Administration Degree in Marketing with a Tourism Concentration

The minimum number of semester credit hours required for this degree is 120.

All candidates seeking this degree must fulfill the Core Curriculum requirements, the Common Body of Knowledge requirements, and the degree requirements, which are listed below.

**Core Curriculum requirements:** Students seeking the Bachelor of Business Administration degree in Marketing with a Tourism Concentration must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhetoric (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement:</td>
</tr>
<tr>
<td></td>
<td>ENG 1013 Freshman Composition</td>
</tr>
<tr>
<td></td>
<td>ENG 1023 Discourse across the Disciplines</td>
</tr>
<tr>
<td>Domain I: Mathematics and Science</td>
<td>Mathematics (3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>MAT 1033 Algebra with Calculus for Business</td>
</tr>
<tr>
<td></td>
<td>Science (6 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Three hours from Level One and three hours from Level Two under the appropriate sections in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td>Domain II: Society and Culture</td>
<td>United States History and Diversity (6 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Any six hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td>Political Studies (6 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>POL 1013 plus additional 3 hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td>Social and Behavioral Sciences (3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td>Economics (3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>ECO 2013 Introductory Macroeconomics</td>
</tr>
<tr>
<td>Domain III: Literature and the Arts</td>
<td>Literature (3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td>The Arts (3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td>Domain IV: Interdisciplinary Studies</td>
<td>(3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>ANT 2053 Introduction to Cultural Anthropology</td>
</tr>
</tbody>
</table>
Common Body of Knowledge (CBK)

All students seeking a B.B.A. degree in the College of Business must complete the following Common Body of Knowledge (CBK) courses in addition to the Core Curriculum.

<table>
<thead>
<tr>
<th>Course or Requirement</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 2013 Principles of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>ACC 2033 Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>BLW 3013 Business Law</td>
<td>3</td>
</tr>
<tr>
<td>COM 1053 Business and Professional Speech</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2013 Introductory Macroeconomics (Domain II)</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2023 Introductory Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>FIN 3013 Principles of Business Finance</td>
<td>3</td>
</tr>
<tr>
<td>GBA 2013 Social and Ethical Issues in Business</td>
<td>3</td>
</tr>
<tr>
<td>IS 1403 Business Information Systems Fluency</td>
<td>3</td>
</tr>
<tr>
<td>IS 3003 Principles of Information Systems for Management</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1033 Algebra with Calculus for Business (Domain I)</td>
<td>3</td>
</tr>
<tr>
<td>MGT 3013 Introduction to Organization Theory, Behavior, and Management</td>
<td>3</td>
</tr>
<tr>
<td>MGT 3043 Business Communication and Professional Development</td>
<td>3</td>
</tr>
<tr>
<td>MGT 4893 Management Strategy and Policy (taken in semester of graduation)</td>
<td>3</td>
</tr>
<tr>
<td>MKT 3013 Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MS 1013 Quantitative Methods for Business and Economics</td>
<td>3</td>
</tr>
<tr>
<td>MS 3033 Management Science and Production Management</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition to the Core Curriculum requirements and requirements from the College of Business Common Body of Knowledge (CBK), all candidates for the degree must complete the following degree requirements.

Degree Requirements

A. 21 required upper-division semester credit hours in the major:

12 hours of required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 3083 Marketing Research</td>
<td>3</td>
</tr>
<tr>
<td>MKT 3113 Retailing</td>
<td>3</td>
</tr>
<tr>
<td>MKT 4093 Consumer Behavior</td>
<td>3</td>
</tr>
<tr>
<td>MKT 4893 Marketing Strategy</td>
<td>3</td>
</tr>
</tbody>
</table>

9 additional semester hours of tourism courses chosen from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLW 4153 Tourism Law</td>
<td>3</td>
</tr>
<tr>
<td>MKT 3103 Tourism Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MKT 3123 Survey of the Tourism Industry</td>
<td>3</td>
</tr>
<tr>
<td>MKT 4543 Tourism Destination Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MKT 4813 Special Topics in Tourism</td>
<td>3</td>
</tr>
<tr>
<td>MKT 4923 Independent Study in Tourism (requires Program Director’s approval)</td>
<td>3</td>
</tr>
<tr>
<td>MKT 4943 Internship in Tourism (requires Program Director’s approval)</td>
<td>3</td>
</tr>
</tbody>
</table>

B. 3 semester credit hours of support work within the College of Business chosen from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 3033 Economics of Managerial Decisions</td>
<td>3</td>
</tr>
<tr>
<td>FIN 3033 Principles of Investment</td>
<td>3</td>
</tr>
<tr>
<td>IS 3053 Database Management for Business</td>
<td>3</td>
</tr>
<tr>
<td>MGT 3253 Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>MGT 3613 Personnel Administration</td>
<td>3</td>
</tr>
</tbody>
</table>
COURSE DESCRIPTIONS
MARKETING
(MKT)

3013  Principles of Marketing
(3-0) 3 hours credit.
Introduction to basic principles of marketing. An examination of market analysis methods and their use to develop the organization’s product mix and the integration of the communication, distribution, and pricing strategies to achieve goals.

3043  Advertising
(3-0) 3 hours credit. Prerequisite: MKT 3013.
The course stresses planning advertising strategy, developing messages, selecting media, and testing effectiveness. Also explores the theory, history, social and economic aspects, and problems of ethics and truth in advertising.

3063  Personal Selling
(3-0) 3 hours credit. Prerequisite: MKT 3013.
Focuses on professional salesmanship. Fundamentals of persuasive interpersonal communication and buyer motivation are stressed as the foundation to effective selling. (Credit cannot be earned for both MKT 3163 and MKT 3063.)

3083  Marketing Research
(3-0) 3 hours credit. Prerequisite: MKT 3013.
Explores the techniques of marketing research as the means to discover opportunities for investing the firm’s resources in its product offerings, including research design, sampling, data collection and analysis, and presentation of findings for marketing action. (Formerly MKT 4083. Credit cannot be earned for both MKT 3083 and MKT 4083.)

3103  Tourism Marketing
(3-0) 3 hours credit.
The course provides the opportunity for students to understand and implement components essential for a successful marketing program in a tourism strategic business unit. Basic knowledge of research tools, market segmentation, strategic planning, advertising, sales, promotions, pricing, and distribution will be explored. (Formerly MKT 3733 and TM 3103. Credit cannot be earned for both MKT 3103 and TM 3103 or MKT 3733.)

3113  Retailing
(3-0) 3 hours credit. Prerequisite: MKT 3013.
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.
3123  **Survey of the Tourism Industry**  
(3-0) 3 hours credit.  
Historical development and organizational structure of the tourism industry. Emphasis is placed on the inter-relation-ship between tourist, resident, business, and government. (Formerly M GT 3703, TM 2103, and TM 3113. Credit cannot be earned for both M KT 3123 and TM 3113 and TM 2103 or M GT 3703.)

4013  **Marketing Management**  
(3-0) 3 hours credit. Prerequisite: M KT 3013.  
An examination of consumer and industrial marketing strategies and processes effective in serving stakeholder needs. Focus is on the strategic analysis of customers, competitors, suppliers, and intermediaries. Demand conditions in growth, mature, and declining markets are examined, and appropriate strategies are developed.

4043  **Advertising Management**  
(3-0) 3 hours credit. Prerequisite: M KT 3013.  
Emphasizes the management of advertising and the key decision variables supporting the advertising strategy process. Examines the nature and scope of advertising campaigns, including case histories.

4073  **International Marketing**  
(3-0) 3 hours credit. Prerequisite: M KT 3013.  
An overview of concepts, processes, and strategies necessary to offer goods and services successfully in the global marketplace. Focus is on analyzing and assessing political, economic, technological, cultural, and competitive climates in global markets; defining the nature of important needs within the consumer and/or business segments of the country; the selection of countries or regions for market expansion strategies; the selection of target customers; and the design of strategies to facilitate market entry and subsequent expansion.

4083  **Topics in Marketing**  
(3-0) 3 hours credit.  
A course focused on marketing topics such as product management, pricing strategies, promotion, distribution management, e-commerce, etc. May be repeated for credit when topics vary, but not more than 6 semester credit hours will apply to a bachelor’s degree.

4093  **Consumer Behavior**  
(3-0) 3 hours credit. Prerequisite: M KT 3013.  
Focus on the customer as a primary consideration in strategic marketing decisions. Analysis of personal and environmental variables in the customer’s world as the basis for market segmentation and subsequent formulation of the marketing mix.

4543  **Tourism Destination Marketing**  
(3-0) 3 hours credit.  
Emphasizes a strategic approach to marketing for tourism destinations: communities, regions, attractions, and resorts. Focus is on the optimal planning, development, and positioning in the context of the overall marketing plan. Includes consideration of environmental and resource requirements, as well as tourism’s social and cultural ramifications. (Formerly M KT 3743 and TM 4543. Credit cannot be earned for both M KT 4543 and TM 4543 or M KT 3743.)

4813  **Special Topics in Tourism**  
(3-0) 3 hours credit.  
Analysis and discussion of events, issues, and trends affecting management and marketing for tourism businesses. May be repeated for credit when topics vary. (Formerly TM 4813.)

4893  **Marketing Strategy**  
(3-0) 3 hours credit. Prerequisites: M KT 3013, senior standing, and 15 additional semester credit hours in marketing. Approval is obtained in the Undergraduate Business Advising Office. This marketing capstone course focuses on integrating marketing functions, processes, and concepts into a coherent and effective marketing strategy. Satisfies degree requirements for M KT 3073 in earlier catalogs.
4913  **Independent Study**  
3 hours credit. Prerequisites: MKT 3013, 9 additional semester credit hours in marketing, senior standing, and permission in writing from the instructor, the Department Chair, and the Dean of the College of Business. See Undergraduate Business Advising Office for required forms. Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4923  **Independent Study in Tourism**  
3 hours credit. Prerequisite: Permission in writing from the Tourism Instructor, the Director of the Tourism Management Program, the Department Chair, and the Dean of the College of Business. See the Undergraduate Business Advising Office for required forms. The course may require independent research, reading, planning, discussion and/or writing under the direction of a sponsoring tourism faculty instructor. May be repeated for credit, but not more than 6 semester credit hours of independent study, regardless of discipline, will apply toward earning a Bachelor of Business Administration degree. (Formerly TM 4913.)

4933  **Internship in Marketing**  
3 hours credit. Prerequisites: MKT 3013, 2.5 grade point average, 9 additional semester credit hours in marketing, and permission in writing from the instructor, the Department Chair, and the Dean of the College of Business. See Undergraduate Business Advising Office for required forms and additional requirements. The opportunity to gain knowledge through the experiential activities of organizational life. Joint cooperation with business, government, and health science institutions in structuring and monitoring work experience aimed at supplementing the learning process. Opportunities are developed in consultation with the faculty advisor and Department Chair and require approval of both. Internship may be repeated once (for a total of 6 semester credit hours) provided the internships are with different organizations, but only 3 hours may count toward the 21 hours of marketing required for the major.

4943  **Internship in Tourism**  
3 hours credit. Prerequisites: Student must currently have an overall 2.5 grade point average and permission in writing from the sponsoring Tourism Instructor, the Director of the Tourism Management Program, the Department Chair, and the Dean of the College of Business. See Undergraduate Business Advising Office for additional requirements and required forms. The course is designed for students seeking supervised full- or part-time work experience in the tourism industry. May be repeated for credit, but not more than 6 semester credit hours of total Internship in Tourism credit will apply toward earning a Bachelor in Business Administration degree. (Formerly TM 4933.)

4953  **Special Studies in Marketing**  
(3-0) 3 hours credit. Prerequisite: MKT 3013. An organized course offering the opportunity for specialized study not normally available as part of the regular course offerings. Could include topics such as marketing channels of distribution, sales management, industrial marketing, current developments in marketing theory, and analysis of ethical, social, and public policy aspects of marketing. May be repeated for credit when topics vary, but not more than 6 semester credit hours will apply to a bachelor’s degree.

4993  **Honors Thesis**  
3 hours credit. Prerequisite: Enrollment limited to students applying for Honors in Marketing (see page 86). Supervised research and preparation of an honors thesis. May be repeated once for credit with advisor’s approval.
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<td>Minor in Health</td>
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<td>B.S. in Kinesiology</td>
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<td>Department of Interdisciplinary Studies and Curriculum and Instruction</td>
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<tr>
<td>B.A. in Interdisciplinary Studies (Early Childhood–Grade 4 generalist certification option)</td>
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<td>158</td>
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</tbody>
</table>
COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

VISION STATEMENT

The College of Education and Human Development (COEHD) at the University of Texas at San Antonio will be an international model for developing inclusive, transformative leaders guided by principles of community, equity, respect for diversity, integrity, service, and scholarship.

MISSION STATEMENT

The College of Education and Human Development will create a democratic, collaborative learning organization in a way that:

- promotes equity, fairness, and accountability
- recognizes a healthy balance among scholarship, teaching, and service
- develops and applies new knowledge of best practices
- prepares educators/leaders to succeed in diverse contexts
- retains students, faculty, and staff
- builds community within and at large
- fosters the holistic development of all its members
- uses resources effectively and efficiently

so that the College graduates citizens who are engaged in productive contributions to self, society, and the global community.

GENERAL INFORMATION

The College of Education and Human Development is made up of four departments and one division: Division of Bicultural-Bilingual Studies; Departments of Counseling, Educational Psychology, and Adult and Higher Education; Educational Leadership and Policy Studies; Health and Kinesiology; and Interdisciplinary Studies and Curriculum and Instruction.

Four undergraduate degrees are offered within the College: the Bachelor of Arts in Interdisciplinary Studies, the Bachelor of Science in Health, the Bachelor of Science in Kinesiology, and the Bachelor of Arts in Mexican American Studies. Minors are also offered in Bicultural Studies, English as a Second Language, Health, and Nonprofit Management. For more information related to the College, consult the web page, http://coehd.utsa.edu.

Advising and Certification Center

Academic Advising

Academic advising services are provided to students in the following majors: Health, Kinesiology, Interdisciplinary Studies, and Mexican American Studies. Advising services are also provided for students seeking a teaching certificate for those Secondary and All-Level content areas that are available at UTSA. This includes students pursuing secondary and all-level certification, students with earned baccalaureate degrees who would like to become certified as teachers, and teachers wishing to add additional certificates to their credentials.

Because teacher certification requirements are determined by state mandates, students should meet with an advisor early in their academic career to verify any differences from baccalaureate degree requirements and teacher certification program requirements. Through careful planning, a student can successfully complete both degree and certification requirements simultaneously. The COEHD Advising and Certification Center is located in MS 4.01.74.

Certification

The University of Texas at San Antonio is approved by the State Board for Educator Certification (SBEC) to offer teacher certificate programs for Texas certification as elementary, middle school, and high school classroom teachers.
Students interested in pursuing elementary and middle school teacher certification will major in Interdisciplinary Studies and follow the appropriate certification program for the desired level of the certificate. Students who would like to become high school teachers will major in the academic area in which certification is desired and simultaneously follow the certification program for this teaching field. Students pursuing all-level certification will follow specialized all-level programs in Music or Kinesiology.

Additional information about UTSA certification programs and teacher certification guidelines is available in the Teacher Certification section of this catalog and in the COEHD Advising and Certification Center, Multidisciplinary Studies Building, Room 4.01.74.
DIVISION OF BICULTURAL-BILINGUAL STUDIES

The Division of Bicultural-Bilingual Studies offers a Bachelor of Arts degree in Mexican American Studies as well as Minors in Bicultural Studies and English as a Second Language. The B.A. in Mexican American Studies prepares students to enter graduate school or pursue a career as an educator, researcher, community leader, or community advocate. The division also offers courses that may be used to fulfill the Core Curriculum requirements or that may be taken as support courses for programs within the University or as electives. Courses in bicultural-bilingual studies offer students the opportunity to prepare for bilingual and/or second-language teaching and give insights into bilingual and multicultural functions in society. Courses in teaching 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 are also designed for those who intend to teach in other areas or to enter fields that rely heavily on an understanding of language learning and bilingualism. In addition, the division offers advanced courses in English for international students that are appropriate for both graduate and undergraduate students.

The Division of Bicultural-Bilingual Studies offers coursework required for teacher certification in the area of bilingual education. Students seeking certification in this area should complete requirements for either the Early Childhood–Grade 4 or the Grades 4–8 Bilingual Generalist Certificate.

DIVISION HONORS

The Division of Bicultural-Bilingual Studies awards Division Honors to certain outstanding students and provides the opportunity for advanced study under close faculty supervision.

Selection for honors designation is based on the student’s academic performance and recommendation by the faculty of the student’s major discipline. To be eligible for the program, students must have a minimum overall grade point average of 3.0 at UTSA and a minimum grade point average of 3.5 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 applying for Division Honors are expected to enroll in the appropriate honors thesis course during their final two semesters. The completed thesis must be approved by the supervising faculty sponsor and another departmental faculty member. Students interested in this program should contact their professors for additional information.

Bachelor of Arts Degree in Mexican American Studies

The Bachelor of Arts in Mexican American Studies is an interdisciplinary program integrating Mexican American studies with a specific liberal arts discipline. Majors are required to complete 39 semester credit hours from a prescribed program of study that must include 18 semester credit hours from one of six options: communities, families, and children; history; literary and cultural studies, political science; sociology; or Spanish.

The minimum number of semester credit hours required for this degree, including the Core Curriculum requirements, is 120.

All candidates for this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Arts degree in Mexican American Studies must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.
### Core Curriculum Requirements

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | Mathematics (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
Science (6 semester credit hours)  
Three hours from Level One and three hours from Level Two will satisfy this core requirement. |
| **Domain II: Society and Culture** | United States History and Diversity (6 semester credit hours)  
Any six hours listed under this section in the list of core courses will satisfy this core requirement.  
Political Studies (6 semester credit hours)  
POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.  
Social and Behavioral Sciences (3 semester credit hours)  
BBL 2003 Language, Culture, and Society  
SOC 1013 Introduction to the Study of Society  
Economics (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
| **Domain III: Literature and the Arts** | Literature (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
The Arts (3 semester credit hours)  
BBL 2023 Latino Cultural Expressions |
| **Domain IV: Interdisciplinary Studies** | (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |

### Degree Requirements

A. 21 semester credit hours of Mexican American studies:

1. 18 required semester credit hours:

   - BBL  2003  Language, Culture, and Society  
   or
   - BBL  3133  Language Development in Bilinguals
   - BBL  2013  Introduction to Chicano(a) Studies
   - BBL  2023  Latino Cultural Expressions
   - BBL  3033  The Mexican American in the Southwest  
   or
   - HIS  3443  Latinos in the United States
   - BBL  4083  Research Seminar in Mexican American Studies
SPN 3493   Mexican American Literature
or
ENG 4613   Topics in Mexican American Literature

2. 3 semester credit hours selected from the following:

  BBL 3043   Psychosocial Processes in Bicultural-Bilingual Environments
  POL 3093   Mexican American Politics (required for political science option)
  SOC 3403   Mexican American Stratification (required for sociology option)
  SOC 3433   Mexican Immigration in U.S. Society (recommended for communities, families, and children option)

B. 18 semester credit hours of required courses completed in one of the following options:

Option in Communities, Families, and Children

  BBL  3053   Foundations of Bilingual Studies
  BBL  4033   Assessment, Learning, and Motivation in Bicultural-Bilingual Contexts
  ESL  3023   Second Language Teaching and Learning EC–4
  SOC  3413   Mexican American Family
  SOC  3503   Sociology of Education
  SOC  3513   Children and Society

Option in History

a. 6 required semester credit hours:

  HIS  2003   Historical Methods
  HIS  4973   Seminar in History

b. 6 semester credit hours selected from the following:

  HIS  3083   History of the American West
  HIS  3153   Development of American Urban Society
  HIS  3163   The Stranger in America
  HIS  3463   History of Religion in the United States

c. 6 semester credit hours selected from the following:

  HIS  3063   The Spanish Borderlands, 1521-1821
  HIS  3073   The Mexican Borderlands/The American Southwest
  HIS  3293   Imperial Spain
  HIS  3303   History of Mexico

Option in Literary and Cultural Studies

a. 3 semester credit hours in methods. Note: This requirement must be completed before continuing with any other option requirements.

  ENG  2213   Literary Criticism and Analysis

b. 3 semester credit hours from the following:

  ENG  2383   Multiethnic Literatures of the United States
  ENG  2423   Literature of Texas and the Southwest
  ENG  3113   Studies in Individual Authors
  ENG  4973   Seminar for English Majors
c. 3 semester credit hours from the following:

- **COM 4413** Topics in Speech Communication [When taught by a MAS affiliate or when focus is on Chicano/Latino content.]
- **COM 4433** Topics in Electronic Media [When taught by a MAS affiliate or when focus is on Chicano/Latino content.]
- **AHC 3423** Pre-Columbian Art and Architecture of Mesoamerica
- **AHC 4333** Topics in Art History and Criticism [When taught by a MAS affiliate or when focus is on Chicano/Latino content.]


d. 3 semester credit hours:

- **ENG 4613** Topics in Mexican American Literature

e. 3 semester credit hours from the following:

- **AMS 3043** Topics in Ethnic American Cultures [When taught by a MAS affiliate or when focus is on Chicano/Latino content.]
- **BBL 3023** Mexican American Culture

f. 3 semester credit hours:

- **ENG 4953** Special Studies in English

**Option in Political Science**

a. 6 required semester credit hours:

- **POL 2703** Scope and Methods in Political Science
- **POL 3083** Ethnic Politics in the United States

b. 3 semester credit hours selected from the following:

- **POL 2503** Introduction to Political Theory
- **POL 2513** Public Administration and Public Policy
- **POL 2533** Introduction to Political Science
- **POL 2603** International Politics
- **POL 2623** Law and Society
- **POL 2633** Comparative Politics

c. 9 semester credit hours of upper-division political science courses, as follows:

- 3 semester credit hours of political theory
- 3 semester credit hours of comparative politics or international relations
- 3 semester credit hours of public administration or public law

**Option in Sociology**

a. 12 required semester credit hours:

- **SOC 1013** Introduction to the Study of Society
- **SOC 3043** Race and Ethnic Relations
- **SOC 3313** Conceptualization and Measurement in Sociology
- **SOC 3343** Classical Sociological Theory
  or
- **SOC 3353** Contemporary Sociological Theory
b. 6 semester credit hours selected from the following:

SOC 3013 Social Stratification
SOC 3033 Population Dynamics
SOC 3073 Migration Dynamics
SOC 3283 Poverty
SOC 3293 Gender Roles
SOC 3413 Mexican American Family

Option in Spanish

a. 18 required semester credit hours:

SPN 3013 Spanish Phonetics and Pronunciation
or
SPN 3113 Linguistic Structures of Spanish
SPN 3043 Advanced Reading

SPN 3063 Grammar and Composition
or
SPN 4103 Composition Workshop

SPN 3463 Latin American Literature to Modernism
or
SPN 3473 Latin American Literature since Modernism

SPN 3623 Latin American Culture and Civilization
or
SPN 3663 Contemporary Latin America
or
SPN 3673 Hispanic Cultural Systems

SPN 4123 The Spanish of the Southwest

C. 39 semester credit hours of electives

Minor in Bicultural Studies

All students pursuing a Minor in Bicultural Studies must complete 18 semester credit hours.

A. 6 semester credit hours of courses on bicultural studies selected from the following:

BBL 2003 Language, Culture, and Society
BBL 2013 Introduction to Chicano(a) Studies
BBL 2023 Latino Cultural Expressions

B. 6 semester credit hours of courses on language selected from the following:

BBL 3013 Language Analysis and Bilingualism
BBL 3043 Psychosocial Processes in Bicultural-Bilingual Environments
BBL 3133 Language Development in Bilinguals
ESL 3003 Applications of Linguistics
C. 6 semester credit hours of courses on culture and society selected from the following:

- BBL 2033 Multiculturalism in the Southwest
- BBL 3023 Mexican American Culture
- BBL 3033 The Mexican American in the Southwest
- BBL 4953 Special Studies in Bilingual and Bicultural Studies

To declare a Minor in Bicultural Studies, obtain advice, or seek approval of substitutions for course requirements; students should consult an academic advisor in the College of Education and Human Development Advising and Certification Center.

**BILINGUAL EDUCATION TEACHER CERTIFICATION OPTIONS**

**Bachelor of Arts Degree in Interdisciplinary Studies (Early Childhood–Grade 4 Bilingual Generalist certification option)**

The minimum number of semester credit hours required for the IDS degree with early childhood–grade 4 bilingual generalist certification is 134, at least 39 of which must be at the upper-division level.

**Core Curriculum requirements:** Students seeking the Bachelor of Arts degree in Interdisciplinary Studies with teacher certification must fulfill University Core Curriculum requirements. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rhetoric</strong> (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement: ENG 1013 Freshman Composition ENG 1023 Discourse across the Disciplines</td>
</tr>
<tr>
<td><strong>Domain I: Mathematics and Science</strong></td>
<td>Mathematics (3 semester credit hours) MAT 1023 College Algebra with Applications Science (6 semester credit hours) Three hours from Level One and three hours from Level Two will satisfy this core requirement.</td>
</tr>
<tr>
<td><strong>Domain II: Society and Culture</strong></td>
<td>United States History and Diversity (6 semester credit hours) Any six hours listed under this section in the list of core courses will satisfy this core requirement. Political Studies (6 semester credit hours) POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement. Social and Behavioral Sciences (3 semester credit hours) IDS 2113 Society and Social Issues (recommended) Economics (3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>
Degree Requirements (50 semester credit hours)

A. 20 semester credit hours of required IDS courses:

14 semester credit hours of required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDS 2713</td>
<td>Modes of Inquiry Across the Fields of Study</td>
</tr>
<tr>
<td>IDS 3203</td>
<td>Physical Science</td>
</tr>
<tr>
<td>IDS 3201</td>
<td>Physical Science Laboratory</td>
</tr>
<tr>
<td>IDS 3213</td>
<td>Earth &amp; Life Science</td>
</tr>
<tr>
<td>IDS 3211</td>
<td>Earth &amp; Life Science Laboratory</td>
</tr>
<tr>
<td>IDS 3303</td>
<td>Studies in Exceptionality</td>
</tr>
</tbody>
</table>

6 semester credit hours selected from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDS 2083</td>
<td>Technology for Liberal Arts and Social Sciences</td>
</tr>
<tr>
<td>IDS 3653</td>
<td>Music and Related Arts</td>
</tr>
<tr>
<td>HTH 2133</td>
<td>Health and Environmental Safety</td>
</tr>
</tbody>
</table>

B. 30 semester credit hours of required support courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 2123</td>
<td>Oral Interpretation</td>
</tr>
<tr>
<td>ECE 2103</td>
<td>Child Growth and Development</td>
</tr>
<tr>
<td>EDP 3133</td>
<td>Principles of Learning &amp; Classroom Management EC-4</td>
</tr>
<tr>
<td>EDU 2103</td>
<td>Education in American Society</td>
</tr>
<tr>
<td>MAT 1153</td>
<td>Essential Elements in Mathematics I</td>
</tr>
<tr>
<td>MAT 1163</td>
<td>Essential Elements in Mathematics II</td>
</tr>
<tr>
<td>RDG 3823</td>
<td>Reading Comprehension—EC-4</td>
</tr>
<tr>
<td>RDG 3803</td>
<td>Writing Development and Processes</td>
</tr>
<tr>
<td>RDG 4733</td>
<td>Literacy Problems—EC-4</td>
</tr>
</tbody>
</table>

6 semester credit hours from the following (at least one course at 3000 level)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPN 2103</td>
<td>Oral and Written Expression</td>
</tr>
<tr>
<td>SPN 2513</td>
<td>Spanish for Special Purposes</td>
</tr>
<tr>
<td>SPN 3033</td>
<td>Oral Communication Skills</td>
</tr>
<tr>
<td>SPN 3063</td>
<td>Grammar and Composition</td>
</tr>
</tbody>
</table>
Certification Requirements (42 semester credit hours)

TASP requirements must be satisfied before enrollment in Certification, Professional Education, and Student Teaching coursework.

A. 24 semester credit hours required of Early Childhood–Grade 4 Bilingual Generalist courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBL 2243</td>
<td>Bilingual Families, Communities and Schools</td>
</tr>
<tr>
<td>BBL 3053</td>
<td>Foundations of Bilingual Studies</td>
</tr>
<tr>
<td>BBL 3013</td>
<td>Language Analysis and Bilingualism</td>
</tr>
<tr>
<td>BBL 3023</td>
<td>Mexican American Culture</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>BBL 3033</td>
<td>Mexican Americans in the Southwest</td>
</tr>
<tr>
<td>BBL 3113</td>
<td>Language Development in Bilinguals</td>
</tr>
<tr>
<td>BBL 3143</td>
<td>Children’s Literature for Bilingual Learners</td>
</tr>
<tr>
<td>ESL 3023</td>
<td>Second Language Teaching and Learning in EC–4</td>
</tr>
<tr>
<td>ESL 3053</td>
<td>Literacy in a Second Language</td>
</tr>
</tbody>
</table>

B. 18 semester credit hours of Professional Education courses:

Admission to the Teacher Certification Program is prerequisite to enrollment in C&I 4403.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBL 4033</td>
<td>Assessment, Learning and Motivation in Bilingual Classrooms</td>
</tr>
<tr>
<td>BBL 4063</td>
<td>Bilingual Approaches to Content-Based Learning</td>
</tr>
<tr>
<td>BBL 4073</td>
<td>Language Arts in a Bicultural-Bilingual Program</td>
</tr>
<tr>
<td>C&amp;I 4403</td>
<td>Mathematics/Science Approaches EC–4</td>
</tr>
<tr>
<td>C&amp;I 4616</td>
<td>Student Teaching – EC–Grade 4</td>
</tr>
</tbody>
</table>

134 total semester credit hours for degree and certification

Bachelor of Arts Degree in Interdisciplinary Studies (Grades 4–8 Bilingual Generalist certification option)

The minimum number of semester credit hours required for the IDS degree with grades 4–8 generalist certification is 137, at least 39 of which must be at the upper-division level.

Core Curriculum requirements: Students seeking the Bachelor of Arts degree in Interdisciplinary Studies with teacher certification must fulfill University Core Curriculum requirements. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
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</thead>
<tbody>
<tr>
<td><strong>Rhetoric</strong> (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement: ENG 1013 Freshman Composition</td>
</tr>
<tr>
<td></td>
<td>EN 1023 Discourse across the Disciplines</td>
</tr>
<tr>
<td><strong>Domain I: Mathematics and Science</strong></td>
<td><strong>Mathematics</strong> (3 semester credit hours) MAT 1023 College Algebra with Applications</td>
</tr>
<tr>
<td></td>
<td><strong>Science</strong> (6 semester credit hours) Three hours from Level One and three hours from Level Two will satisfy</td>
</tr>
<tr>
<td></td>
<td>this core requirement.</td>
</tr>
</tbody>
</table>
**Degree Requirements (57 semester credit hours)**

**A. 20 semester credit hours of required courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDS 2083</td>
<td>Technology for Liberal Arts and Social Sciences</td>
</tr>
<tr>
<td>or HTH 2133</td>
<td>Health and Environmental Safety</td>
</tr>
<tr>
<td>IDS 2213</td>
<td>World Civilizations since the Fifteenth Century</td>
</tr>
<tr>
<td>IDS 2713</td>
<td>Modes of Inquiry Across Fields of Study</td>
</tr>
<tr>
<td>IDS 3203</td>
<td>Physical Science</td>
</tr>
<tr>
<td>IDS 3201</td>
<td>Physical Science Laboratory</td>
</tr>
<tr>
<td>IDS 3213</td>
<td>Earth and Life Science</td>
</tr>
<tr>
<td>IDS 3211</td>
<td>Earth and Life Science Laboratory</td>
</tr>
<tr>
<td>IDS 3303</td>
<td>Studies in Exceptionality</td>
</tr>
</tbody>
</table>

**B. 31 semester credit hours of required support courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDP 2113</td>
<td>Development in the Elementary and Middle School Child</td>
</tr>
<tr>
<td>EDU 2103</td>
<td>Education in American Society</td>
</tr>
<tr>
<td>GRG 1023</td>
<td>World Regional Geography</td>
</tr>
<tr>
<td>MAT 1153</td>
<td>Essential Elements of Mathematics I</td>
</tr>
<tr>
<td>MAT 1163</td>
<td>Essential Elements of Mathematics II</td>
</tr>
<tr>
<td>MAT 1093</td>
<td>Pre-Calculus</td>
</tr>
<tr>
<td>MAT 1203</td>
<td>Calculus Concepts and Applications</td>
</tr>
<tr>
<td>RDG 3523</td>
<td>Developmental Reading – Grades 4–8</td>
</tr>
<tr>
<td>RDG 3633</td>
<td>Literature and Other Texts Across the Content Areas – Grades 4–8</td>
</tr>
</tbody>
</table>

Additional 3 SCH in Level I or II Science course in a different discipline from science courses taken for core requirement. One science course must include a wet laboratory that can be met in core requirement: 1 SCH
C. 6 semester credit hours from the following (at least one course at 3000 level):

- SPN 2103 Oral and Written Expression
- SPN 2513 Spanish for Special Purposes
- SPN 3033 Oral Communication Skills
- SPN 3063 Grammar and Composition

Certification requirements (38 semester credit hours)

TASP requirements must be satisfied before enrollment in Certification, Professional Education, and Student Teaching coursework.

A. 18 semester credit hours required of Grades 4–8 Bilingual Generalist courses:

- BBL 2243 Bilingual Families, Communities and Schools
- BBL 3053 Foundations of Bilingual Studies
- BBL 3023 Mexican American Culture
  or
- BBL 3033 Mexican Americans in the Southwest
- BBL 3133 Language Development in Bilinguals
- ESL 3053 Literacy in a Second Language
- ESL 3063 Second Language Acquisition in Early Adolescence

B. 20 semester credit hours of Professional Education courses:

- BBL 4033 Assessment, Learning and Motivation in Bilingual Classrooms
- BBL 4063 Bilingual Approaches to Content-Based Learning
- BBL 4073 Language Arts in a Bicultural-Bilingual Program
- C&I 4603 Approaches to Teaching Mathematics and Science (4–8)
- C&I 4502 Mathematics and Science Integrated Laboratory
- C&I 4626 Student Teaching: 4-8 Generalists

137 total semester credit hours for degree and certification.

COURSE DESCRIPTIONS

BICULTURAL-BILINGUAL STUDIES

(BBL)

2003 Language, Culture, and Society
(3-0) 3 hours credit.
The interdisciplinary study of language in its cultural and social contexts, with emphasis on linguistically heterogeneous communities. Topics include language and ethnicity, language and gender, language and social class, language acquisition, and oral and written language.

2013 Introduction to Chicano(a) Studies
(3-0) 3 hours credit.
An introduction to the field of Chicano(a) studies from its inception to the present. Chicano(a) studies and scholarship are explored through multidisciplinary concepts, theory, and methodologies, providing differing interpretations of the Chicano and Chicana experience in the United States.
2023  **Latino Cultural Expressions**  
(3-0) 3 hours credit.  
An introductory overview of Hispanic visual, performing, and folk arts from their origins in the Iberian peninsula, through the later blending of cultures and their parallelism during revolutionary periods, to contemporary Latino expressions in the United States.

2033  **Multiculturalism in the Southwest**  
(3-0) 3 hours credit.  
A panoramic study of the concept of culture and the social dynamics of exchange among those ethnic groups that determine the multicultural milieu of the Southwest. Examination of cultural differences and similarities among all peoples of the region and the role of multiculturalism in politics, education, economics, religion, and everyday life.

2243  **Bilingual Families, Communities, and Schools**  
(3-0) 3 hours credit.  
Examination of the interrelationships among Latino bilingual families, communities, and schools as they relate to the achievement of children in the bilingual classroom. Focus on cultural practices including modes of communication that facilitate Latino family involvement in the schools and other community organizations (health, special services). Field-based experiences required. Course offered in Spanish.

3013  **Language Analysis and Bilingualism**  
(3-0) 3 hours credit.  
Survey of concepts in descriptive and contrastive linguistics; analysis of language contact phenomena, including cross-linguistic transfer, language alternation, and bilingualism. Offered in Spanish and English.

3023  **Mexican American Culture**  
(3-0) 3 hours credit.  
A survey of Mexican American cultural distinctiveness in the areas of biculturalism, cultural production and social organization. Topics may include family and kinship, folklore, health, language, music and religion.

3033  **The Mexican American in the Southwest**  
(3-0) 3 hours credit.  
Historical foundations of the United States–Mexico biculturalism in the Southwest. An examination of the historical forces that created and shaped the Mexican American people as a bicultural community. Attention is given to Mexican American contributions in arts, economics, literature, and politics.

3043  **Psychosocial Processes in Bicultural-Bilingual Environments**  
(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.

3053  **Foundations of Bilingual Studies**  
(3-0) 3 hours credit.  
Investigation of the philosophies and theories of schooling in bilingual societies, with focus on language policy and the sociological, psychological, and legal aspects involved. (Formerly BBL 4023. Credit cannot be earned for BBL 3053 and BBL 4023.)

3133  **Language Development in Bilinguals**  
(3-0) 3 hours credit.  
A study of bilingual language development in its social and cultural contexts. Emphasis on factors affecting successful bilingual language development in schools and communities.
3143  **Children’s Literature for Bilingual Learners**  
(3-0) 3 hours credit.  
Study of the use of oral and written literature for children in bilingual programs. The history and development of Spanish language children’s literature from social, cultural, and political perspectives. Emphasis on Mexican American cultural experiences as well as universal themes. Taught in Spanish and English; field-based experiences required.

3403  **Cultural and Linguistic Diversity in a Pluralistic Society**  
(3-0) 3 hours credit.  
Examination of sociolinguistic and sociocultural principles central to culturally diverse settings, including the classroom. Various pedagogical practices will be explored to identify culturally inclusive responses.

4033  **Assessment, Learning, and Motivation in Bicultural-Bilingual Classrooms**  
(3-0) 3 hours credit.  
A survey of learning and motivation theory and examination of evaluation and assessment procedures in bicultural-bilingual settings, including formal and informal assessment of language proficiency and learning for instructional purposes. The appropriate use of standardized tests with language minority populations will be included. Twenty-five hours of directed field experience in elementary and/or middle school classrooms are required.

4063  **Bilingual Approaches to Content-Based Learning**  
(3-0) 3 hours credit.  
An investigation of appropriate first language usage in bilingual classrooms, focusing on the different content areas, appropriate terminology for native language instruction, and the study of languages distribution strategies. Taught in Spanish. Twenty-five hours of directed field experience in elementary and/or middle school classrooms are required.

4073  **Language Arts in a Bicultural-Bilingual Program**  
(3-0) 3 hours credit.  
An examination of theories, instructional strategies, texts and materials for biliteracy development in the elementary bilingual classroom. Emphasis on the integrated use of listening, speaking, reading and writing in content area teaching. Offered in Spanish and English. Twenty-five hours of directed field experience in elementary and/or middle school classrooms are required.

4083  **Research Seminar in Mexican American Studies**  
(3-0) 3 hours credit.  
Provides students the opportunity to compare, contrast, and integrate social science theory and methods, and guides students in the conduct of sociocultural research in the Mexican American community. Emphasis will be given to qualitative and ethnographic methods and theory.

4913  **Independent Study**  
3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, and the Division Director 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4953  **Special Studies in Bilingual and Bicultural Studies**  
(3-0) 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 may be repeated for credit when the topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree. To apply credit earned in BBL 4953 toward a minor, consent of the academic advisor, in the CoEHD academic advising center, is required.

4993  **Honors Thesis**  
3 hours credit. Prerequisites: Enrollment limited to candidates for Honors in Mexican American Studies during their last two semesters; completion of honors examination and consent of the Honors College. Supervised research and preparation of an honors thesis. May be repeated once with thesis advisor’s approval.
Minor in English as a Second Language

All students pursuing a Minor in English as a Second Language must complete 18 semester credit hours.

A. 12 semester credit hours of courses in English as a second language:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESL 3003</td>
<td>Applications of Linguistics</td>
</tr>
<tr>
<td>ESL 3033</td>
<td>Foundations in English as a Second Language</td>
</tr>
<tr>
<td>ESL 3053</td>
<td>Literacy in a Second Language</td>
</tr>
</tbody>
</table>

And one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBL 3013</td>
<td>Language Analysis and Bilingualism</td>
</tr>
<tr>
<td>BBL 3133</td>
<td>Language Development in Bilinguals</td>
</tr>
<tr>
<td>ESL 3023</td>
<td>Second Language Teaching and Learning in EC–4</td>
</tr>
<tr>
<td>ESL 3063</td>
<td>Second Language Acquisition in Early Adolescence</td>
</tr>
</tbody>
</table>

B. 3 semester credit hours of courses on culture and society selected from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBL 2033</td>
<td>Multiculturalism in the Southwest</td>
</tr>
<tr>
<td>BBL 3023</td>
<td>Mexican American Culture</td>
</tr>
<tr>
<td>BBL 3033</td>
<td>The Mexican American in the Southwest</td>
</tr>
</tbody>
</table>

C. 3 semester credit hours of courses on language minority education selected from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBL 3053</td>
<td>Foundations of Bilingual Studies</td>
</tr>
<tr>
<td>BBL 4033</td>
<td>Assessment, Learning, and Motivation in Bicultural-Bilingual Classrooms.</td>
</tr>
<tr>
<td>BBL 4953</td>
<td>Special Studies in Bilingual and Bicultural Studies</td>
</tr>
</tbody>
</table>

To declare a Minor in English as a Second Language, obtain advice, or seek approval of substitutions for course requirements, students should consult an academic advisor in the CoEHD Advising and Certification Center.

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 is given to psycholinguistic and sociolinguistic issues in second-language acquisition, and to oral language development, reading, and writing.

3023 Second Language Teaching and Learning in EC–4
(3-0) 3 hours credit.
Application of principles of second language acquisition to promote language and academic development in pre-K to fourth grade classrooms. Attention to the needs of English language learners during the first years of schooling.

3033 Foundations in English as a Second Language
(3-0) 3 hours credit.
Introduction to the field of English as a second language, with attention to basic concepts of second-language processing in various language learning contexts.
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.

3063  **Second Language Acquisition in Early Adolescence**  
(3-0) 3 hours credit.  
Principles of second language acquisition to promote language and academic development. Attention to the characteristics of English language learning in early adolescence.

### COURSE DESCRIPTIONS  
#### ENGLISH FOR INTERNATIONAL STUDENTS (EIS)

1063  **ESL for International Students: Listening**  
(3-0) 3 hours credit.  
Development of listening comprehension and related note-taking skills needed in academic settings. (Formerly ESL 1063. Credit cannot be earned for both EIS 1063 and ESL 1063.)

1073  **ESL for International Students: Communicating Effectively**  
(3-0) 3 hours credit.  
Development of oral discourse, including oral presentation, small group discussion, and pronunciation needed in academic settings. (Formerly ESL 1073. Credit cannot be earned for both EIS 1073 and ESL 1073.)

1083  **Content-based Reading**  
(3-0) 3 hours credit.  
Development of reading proficiency needed for reading in undergraduate courses. Includes TASP preparation.

1093  **Content-based Writing**  
(3-0) 3 hours credit.  

1183  **Advanced Reading Strategies**  
(3-0) 3 hours credit.  
Development of reading proficiency required for specific areas of study at the graduate level.

1193  **Advanced Writing Strategies**  
(3-0) 3 hours credit.  
Development of writing proficiency required for specific areas of study at the graduate level.
DEPARTMENT OF COUNSELING, EDUCATIONAL PSYCHOLOGY, AND ADULT AND HIGHER EDUCATION

The Department of Counseling, Educational Psychology, and Adult and Higher Education provides support work for undergraduate degrees and offers two programs leading to the masters degree. The Master of Arts in Education with an emphasis in Adult and Higher Education offers the opportunity for advanced study for careers in educational institutions serving adult learners. The Master of Arts degree in Counseling offers the opportunity for advanced study and professional development in the field of counseling. (See the UTSA Graduate Catalog for further information.)

COURSE DESCRIPTIONS
EDUCATIONAL PSYCHOLOGY
(EDP)

1702 College Success Seminar
(1-1) 2 hours credit.
Training in the application of self-assessment, time management, budgeting, social skills, and learning/study strategies, with emphasis on the student’s need to succeed in higher education. Laboratory required.

2113 Development in the Elementary and Middle School Child
(3-0) 3 hours credit. Prerequisites: Sophomore standing and satisfaction of TASP requirement.
An introduction to the cognitive, psychosocial, sociocultural, psychoanalytic and moral theories of development from birth through adolescence. Topics also include atypical development, exceptionality and learning challenges. Emphasis is on applications at the elementary school level.

3103 Learning and Development in the Elementary School Child
(3-0) 3 hours credit. Prerequisites: Sophomore standing and satisfaction of TASP requirement. IDS 2103 recommended.
An introduction to major theories of learning and development, with an emphasis on applications at the elementary school level. Topics also include individual and group differences, tests and measurements, motivation, and elementary-level classroom management.

3133 Principles of Learning and Classroom Management EC–4
(3-0) 3 hours credit. Prerequisites: Sophomore standing and satisfaction of TASP requirement.
An introduction to the behavioral, social, cognitive and constructivist views of learning. Examines various theories and models of classroom organization and management. Included are such topics as motivation, behavior modification, assertive discipline, views of intelligence, self-regulation, multicultural education and assessment, and grading. Emphasis is on the early elementary grades EC–4.

3203 Learning and Development in the Secondary School Adolescent
(3-0) 3 hours credit. Prerequisites: Sophomore standing and satisfaction of TASP requirement.
An introduction to major theories of learning and development, with an emphasis on applications at the secondary level. Topics include individual and group differences, motivation, and secondary-level classroom management.

3303 Principles of Learning and Classroom Management (Grades 4–8)
(3-0) 3 hours credit. Prerequisites: Sophomore standing and satisfaction of TASP requirement.
An introduction to the behavioral, social, cognitive and constructivist views of learning. Examines various theories and models of classroom organization and management. Included are such topics as motivation, behavior modification, assertive discipline, views of intelligence, self-regulation, multicultural education, assessment and grading. Emphasis is on the middle elementary grades 4 through 8.
4203  **Assessment and Evaluation for Secondary Teachers**  
(3-0) 3 hours credit. Prerequisites: Completion of all requirements for admission to the teacher certification program, including but not limited to satisfaction of the TASP requirement, and completion of EDU 2103 and EDP 3203. This course will discuss the principles and techniques necessary to develop sound assessment strategies. The primary focus of the course will be on the creation of test items, administration of classroom evaluation procedures, and the roles of testing, measurement, and evaluation in daily classroom practice. The use and interpretation of standardized tests, alternative assessments, norm- and criterion-referenced assessments will also be discussed as well as theoretical and ethical issues related to testing and evaluation. This course is required of all students seeking secondary certification. Restricted course; advisor code required for registration.

4913  **Independent Study**  
3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student’s advisor, the Department Chair 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4953  **Special Studies in Educational Psychology**  
(3-0) 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 may be repeated for credit when topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4993  **Honors Thesis**  
3 hours credit. Prerequisites: Enrollment limited to Honors College students during the last two semesters with sponsorship by a department faculty member. Supervised research and preparation for an honors thesis. May be repeated once with advisor’s approval.
DEPARTMENT OF EDUCATIONAL LEADERSHIP AND POLICY STUDIES

The Department of Educational Leadership and Policy Studies prepares educators to become transformational leaders who can work effectively in diverse, ambiguous, and challenging contexts. The goals of this transformational leadership include equity, excellence, social justice, democracy, risk-taking, and responsiveness to community needs. Faculty in the Department of Educational Leadership and Policy Studies are strongly committed to developing collaborative and responsive relationships with area schools and communities. The Department offers the Master of Arts Degree in Education with an Educational Leadership Concentration and the Doctor of Education Degree in Educational Leadership.

COURSE DESCRIPTIONS

EDUCATIONAL LEADERSHIP
(EDL)

4911-3 Independent Study
1 to 3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student’s advisor, the Department Chair or 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4953 Special Studies in Educational Leadership
(3-0) 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 may be repeated for credit when topics vary, but not more than 6 semester credit hours, regardless of the discipline, will apply to a bachelor’s degree.

4993 Honors Thesis
3 hours credit. Prerequisites: Enrollment limited to Honors College students during the last two semesters with sponsorship by a department faculty member. Supervised research and preparation for an honors thesis. May be repeated for credit once with advisor’s approval.

COURSE DESCRIPTIONS

EDUCATION
(EDU)

2103 Education in American Society
(3-0) 3 hours credit. Prerequisites: Sophomore standing and passing scores on all three sections of the TASP. Study of education as a social, economic, and moral force in our nation’s development. Contemporary issues are related to their historical antecedents in order to demonstrate education’s role in a democratic society. Topics discussed include religion and education, the development and structure of American schooling, and legal and ethical aspects of education. (Formerly EDU 3103. Credit cannot be earned for both EDU 2103 and EDU 3103.)

4911-3 Independent Study
1 to 3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the Department Chair or 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.
4953  **Special Studies in Education**  
(3-0) 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 may be repeated for credit when topics vary, but not more than 6 semester credit hours, regardless of the discipline, will apply to a bachelor’s degree.
DEPARTMENT OF HEALTH AND KINESIOLOGY

The Department of Health and Kinesiology offers Bachelor of Science degrees for students majoring in Health and Kinesiology. The Department also offers a minor in Nonprofit Management.

Students pursuing a Bachelor of Science in Health will select an emphasis area in community health, school health, or health and fitness. The community health emphasis prepares students for health careers in public, private, and voluntary health agencies. Students interested in teaching health in grades 8–12 must seek teacher certification as required by the State Board for Educator Certification. The health and fitness emphasis prepares students for careers in health and fitness programming in corporate, commercial, and public settings. All health emphases require both academic coursework and practical experience via a practicum and an internship. Students interested in pursuing a major or minor in Health are required to consult with the College of Education and Human Development Advising and Certification Center.

Students pursuing a Bachelor of Science degree in Kinesiology will select an emphasis in either teacher preparation or kinesiology. The teacher preparation emphasis provides proper academic and professional experience as required by the State Board for Educator Certification for PreK–12 Physical Education. To be certified as a teacher by the State of Texas, a student must complete their coursework, have practical teaching experience (student teaching), and pass the TExES examination. Students with an emphasis in kinesiology will select a specialization area of Sport Psychology, Fitness and Sport Management, Sport Performance, or Clinical Exercise and Athletic Training. The application coursework for the specialization areas will be determined by the College of Education and Human Development Advising and Certification Center. The kinesiology emphasis requires both academic coursework and practical experience via the internship.

Students from any discipline may select a minor in Nonprofit Management (American Humanics). American Humanics is a national organization devoted to preparing students for careers in youth, environmental, medical, arts, and other nonprofit organizations. Upon successful completion of this minor, the student will receive national certification from American Humanics in nonprofit management and leadership, in addition to the chosen undergraduate major.

DEPARTMENT HONORS

The Department of Health and Kinesiology awards Department Honors to certain outstanding students and provides the opportunity for advanced study under close faculty supervision.

Selection of honors designation is based on the student’s academic performance and recommendation by the faculty of the student’s major discipline. To be eligible for the program, students must have a minimum overall grade point average of 3.0 at UTSA and a minimum grade point average of 3.5 in their major at UTSA. The minimum grade point averages must be maintained for students to receive the approval of the Department Honors Committee and the discipline faculty. Students applying for Department Honors are expected to enroll in the appropriate honors thesis course during their final two semesters. The completed thesis must be approved by the supervising faculty sponsor and another departmental faculty member. Students interested in this program should contact their professors for additional information.

Bachelor of Science Degree in Health

This program provides students with the opportunity to pursue a Bachelor of Science degree in Health with an emphasis in one of the following: community health, school health (teacher certification), or health and fitness.

Core Curriculum requirements: Students seeking the Bachelor of Science degree in Health, regardless of the emphasis they choose, must fulfill University Core Curriculum requirements. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

UTSA 2002–2004 Undergraduate Catalog
The minimum number of semester credit hours for this degree, including the Core Curriculum requirements, is 124, at least 45 of which must be at the upper-division level.

All candidates for the degree must complete the following degree requirements in addition to the Core Curriculum requirements.

### Degree Requirements

**A. 36 semester credit hours of health (Common Body of Knowledge):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTH 2513</td>
<td>Personal Health Management</td>
</tr>
<tr>
<td>HTH 2523</td>
<td>First Aid and Safety</td>
</tr>
<tr>
<td>HTH 3503</td>
<td>Foundations of Health Theory</td>
</tr>
</tbody>
</table>

### Core Curriculum Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rhetoric</strong> (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement:</td>
</tr>
<tr>
<td></td>
<td>ENG 1013 Freshman Composition</td>
</tr>
<tr>
<td></td>
<td>ENG 1023 Discourse across the Disciplines</td>
</tr>
<tr>
<td><strong>Domain I: Mathematics and Science</strong></td>
<td><strong>Mathematics</strong> (3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td><strong>Science</strong> (6 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>BIO 1113 (&amp; 1122 as support work)</td>
</tr>
<tr>
<td></td>
<td>Any additional three hours listed under the Level 2 section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td><strong>Domain II: Society and Culture</strong></td>
<td><strong>United States History and Diversity</strong> (6 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td><strong>Political Studies</strong> (6 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td><strong>Social and Behavioral Sciences</strong> (3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td><strong>Economics</strong> (3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td><strong>Domain III: Literature and the Arts</strong></td>
<td><strong>Literature</strong> (3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td><strong>The Arts</strong> (3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td><strong>Domain IV: Interdisciplinary Studies</strong></td>
<td>(3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>
HTH 3513  Issues in Community Health
HTH 3523  Worksite Health Promotion
HTH 3533  Drugs and Health
HTH 3543  Growth and Development
HTH 3553  Emotional Wellness
HTH 4503  Survey of Human Disease
HTH 4513  Consumer Health
HTH 4523  Understanding Human Sexuality
HTH 4533  Nutrition and Health

B. 19 semester credit hours of required support work:

AHS 2083  Human Biology: Anatomy
AHS 2091  Human Biology: Anatomy Laboratory
AHS 2103  Human Biology: Physiology
AHS 2111  Human Biology: Physiology Laboratory
BIO 1122  Laboratory Investigations in Biology
COM 2123  Oral Interpretation
KIN 3003  Computer Applications in Kinesiology and Health
MGT 3013  Introduction to Organization Theory, Behavior, and Management

C. 21 semester credit hours of electives, 15 of which must be upper-division, chosen from the following, or others with approval of department advisor:

HTH 4953  Special Topics
MGT 3803  Strategic Management of Nonprofit Organizations
MKT 3013  Principles of Marketing
NPO 3003  Fundraising in Nonprofit Agencies
POL 3293  Political Movements
POL 3553  Social Policy in Modern Welfare States
POL 3603  Public Policy Formulation and Implementation
PSY 2533  Social Psychology
PSY 4253  Psychology and Health
SOC 2013  Social Problems
SOC 3163  Marriage and the Family
SOC 3203  Gerontology
SOC 3213  Medical Sociology
SOC 3423  Mass Media in Society

D. 6 semester credit hours of Internship:

HTH 4936*  Internship in Health

*Must have completed all degree requirements and support work and have a minimum cumulative grade point average of 2.5.

Recommended Course Sequence

<table>
<thead>
<tr>
<th>Year 1 – Fall</th>
<th>Year 1 – Spring</th>
<th>Year 2 – Fall</th>
<th>Year 2 – Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Curriculum</td>
<td>Core Curriculum</td>
<td>Core Curriculum</td>
<td>Core Curriculum</td>
</tr>
<tr>
<td>ENG 1013</td>
<td>ENG 1023</td>
<td>Economics</td>
<td>Interdisc. Studies</td>
</tr>
<tr>
<td>History</td>
<td>History</td>
<td>The Arts</td>
<td>English Literature</td>
</tr>
<tr>
<td>MATH</td>
<td>Soc./Behav. Sci.</td>
<td>HTH 2513</td>
<td>HTH 3543</td>
</tr>
<tr>
<td>BIO 1113, 1122</td>
<td>Level II Science</td>
<td>HTH 2523</td>
<td>COM 2123</td>
</tr>
<tr>
<td>Political Studies</td>
<td>Political Studies</td>
<td>AHS 2083, 2091</td>
<td>AHS 2103, 2111</td>
</tr>
</tbody>
</table>
School Health Emphasis

The minimum number of semester credit hours for this degree, including the Core Curriculum requirements, is 124, at least 45 of which must be at the upper-division level.

All candidates for the degree must complete the following degree requirements in addition to the Core Curriculum requirements.

Degree Requirements

A. 36 semester credit hours of health (Common Body of Knowledge):

- HTH 2513 Personal Health Management
- HTH 2523 First Aid and Safety
- HTH 3503 Foundations of Health Theory
- HTH 3513 Issues in Community Health
- HTH 3523 Worksite Health Promotion
- HTH 3533 Drugs and Health
- HTH 3543 Growth and Development
- HTH 3553 Emotional Wellness
- HTH 4503 Survey of Human Disease
- HTH 4513 Consumer Health
- HTH 4523 Understanding Human Sexuality
- HTH 4533 Nutrition and Health

B. 16 semester credit hours of required support work:

- AHS 2083 Human Biology: Anatomy
- AHS 2091 Human Biology: Anatomy Laboratory
- AHS 2103 Human Biology: Physiology
- AHS 2111 Human Biology: Physiology Laboratory
- BIO 1122 Laboratory Investigations in Biology
- COM 2123 Oral Interpretation
- KIN 3003 Computer Applications in Kinesiology and Health

C. 9 semester credit hours of electives, chosen from the following:

- HTH 4953 Special Topics
- PSY 2533 Social Psychology
- PSY 4253 Psychology and Health
- SOC 3163 Marriage and the Family
- SOC 3423 Mass Media in Society
D. 21 hours of Professional Education, Reading, and Student Teaching coursework

1. Professional Education and Reading Coursework:

   C&I 4203 Models of Teaching in the Content Area of the Secondary School
   EDU 2103 Education in American Society
   EDP 3203 Learning and Development in the Secondary School Adolescent
   EDP 4203 Assessment and Evaluation for Secondary Teachers
   RDG 3773 Introduction to Content Area Reading-Secondary

   C&I 4203, EDP 4203, and RDG 3773 are restricted classes. Advisor authorization for these classes will be issued only if all prerequisites have been completed. C&I 4203 and RDG 3773 are not offered in the summer.

2. Student Teaching Component (6 semester credit hours):

   C&I 4646 Student Teaching: Secondary

Recommended Course Sequence

<table>
<thead>
<tr>
<th>Year 1 – Fall</th>
<th>Year 1 – Spring</th>
<th>Year 2 – Fall</th>
<th>Year 2 – Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Curriculum</td>
<td>Core Curriculum</td>
<td>Core Curriculum</td>
<td>Core Curriculum</td>
</tr>
<tr>
<td>ENG 1013 History</td>
<td>ENG 1023 History</td>
<td>ENG 1023 Economics</td>
<td>ENG 1023 Interdisc. Studies</td>
</tr>
<tr>
<td>MATH</td>
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<tr>
<td>BIO 1113, 1122</td>
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<tr>
<td>Political Studies</td>
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</tr>
<tr>
<td>Year 3 – Fall</td>
<td>Year 3 – Spring</td>
<td>Year 4 – Fall</td>
<td>Year 4 – Spring</td>
</tr>
<tr>
<td>HTH 3503</td>
<td>HTH 3523 (Spring only)</td>
<td>HTH 3513 (Fall only)</td>
<td>C&amp;I 4646</td>
</tr>
<tr>
<td>HTH 3533</td>
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<td>HTH 4513 (Fall only)</td>
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<td>HTH 4523</td>
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<td>EDU 2103</td>
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<tr>
<td>Elective (3 hrs)</td>
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<tr>
<td>Year 3 – Fall</td>
<td>Year 3 – Spring</td>
<td>Year 4 – Fall</td>
<td>Year 4 – Spring</td>
</tr>
<tr>
<td>HTH 3503</td>
<td>HTH 3523 (Spring only)</td>
<td>HTH 3513 (Fall only)</td>
<td>C&amp;I 4646</td>
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<tr>
<td>HTH 3533</td>
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<td>HTH 4513 (Fall only)</td>
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<td>EDU 2103</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Elective (3 hrs)</td>
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<td></td>
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</tr>
</tbody>
</table>

Health and Fitness Emphasis

The minimum number of semester credit hours for this degree, including the Core Curriculum requirements, is 126, at least 45 of which must be at the upper-division level.

All candidates for the degree must complete the following degree requirements in addition to the Core Curriculum requirements.

Degree Requirements

A. 24 semester credit hours of required Health courses:

   HTH 2513 Personal Health Management
   HTH 2523 First Aid and Safety
   HTH 3503 Foundations of Health Theory
   HTH 3523 Worksite Health Promotion
   HTH 3543 Growth and Development
HTH 4503  Survey of Human Disease  
HTH 4513  Consumer Health  
HTH 4533  Nutrition and Health  

B. 38 semester credit hours of required Professional Preparation courses:

1. 32 semester credit hours of required courses:

KIN 2001  Skill Analysis in Physical Activity: Individual Activities  
KIN 2401  Gymnastics and Fitness Training  
KIN 2423  Management and Organization in Kinesiology and Sports  
KIN 3003  Computer Applications in Kinesiology and Health  
KIN 3303  Athletic Injuries and Training Procedures  
KIN 3313  Anatomy and Physiology for Kinesiology  
KIN 3323  Biomechanics  
KIN 3433  Exercise Physiology  
KIN 3443  Fitness Testing and Exercise Prescription  
KIN 4023  Exercise Psychology  
KIN 4113  Evaluation  
KIN 4403  Motor Learning  

2. 6 semester credit hours from the following:

KIN 4143  Advanced Athletic Training  
KIN 4223  Advanced Topics in Exercise and Sport Psychology  
KIN 4233  Advanced Topics in Exercise Physiology and Fitness Training  
KIN 4243  Musculoskeletal and Cardiopulmonary Rehabilitation  

C. 13 semester credit hours of required support work:

AHS 2083  Human Biology: Anatomy  
AHS 2091  Human Biology: Anatomy Laboratory  
AHS 2103  Human Biology: Physiology  
AHS 2111  Human Biology: Physiology Laboratory  
BIO 1122  Laboratory Investigations in Biology  
COM 2123  Oral Communications  

D. 9 semester credit hours of Internship:

KIN 4943  Practicum in Kinesiology  
KIN 4936*  Internship in Kinesiology  

*Must have completed all degree requirements and support work and have a minimum cumulative grade point average of 2.5.  

Recommended Course Sequence

<table>
<thead>
<tr>
<th>Year 1 – Fall</th>
<th>Year 1 – Spring</th>
<th>Year 2 – Fall</th>
<th>Year 2 – Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Curriculum</td>
<td>Core Curriculum</td>
<td>Core Curriculum</td>
<td>Core Curriculum</td>
</tr>
<tr>
<td>ENG 1013</td>
<td>ENG 1023</td>
<td>Economics</td>
<td>Interdisc. Studies</td>
</tr>
<tr>
<td>History</td>
<td>History</td>
<td>The Arts</td>
<td>English Literature</td>
</tr>
<tr>
<td>MATH</td>
<td>Soc./Behav. Sci.</td>
<td>Political Studies</td>
<td>HTH 3503</td>
</tr>
<tr>
<td>BIO 1113, 1122</td>
<td>Level II Science</td>
<td>HTH 2523</td>
<td>COM 2123</td>
</tr>
<tr>
<td>Political Studies</td>
<td>HTH 2513</td>
<td>AHS 2083, 2091</td>
<td>AHS 2103, 2111</td>
</tr>
</tbody>
</table>
All students pursuing the Minor in Health must complete 18 semester credit hours.

<table>
<thead>
<tr>
<th>Year 3 – Fall</th>
<th>Year 3 – Spring</th>
<th>Year 4 – Fall</th>
<th>Year 4 – Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTH 4533</td>
<td>HTH 3523 (Spring only)</td>
<td>HTH 3513 (Fall only)</td>
<td>KIN 4936</td>
</tr>
<tr>
<td>KIN 2001, 2401</td>
<td>HTH 3543 (Spring only)</td>
<td>KIN 3443</td>
<td>Choose 2 of the</td>
</tr>
<tr>
<td>KIN 2423</td>
<td>HTH 4503</td>
<td>KIN 4023</td>
<td>following:</td>
</tr>
<tr>
<td>KIN 3003</td>
<td>KIN 3323</td>
<td>KIN 4113</td>
<td>KIN 4223</td>
</tr>
<tr>
<td>KIN 3303</td>
<td>KIN 3433</td>
<td>KIN 4943</td>
<td>KIN 4233</td>
</tr>
<tr>
<td>KIN 3313</td>
<td>KIN 4403</td>
<td></td>
<td>KIN 4143</td>
</tr>
</tbody>
</table>

To declare a Minor in Health or to obtain advice, students should consult an advisor in the College of Education and Human Development Advising and Certification Center.

**Bachelor of Science Degree in Kinesiology**

This program provides students with the opportunity to pursue a Bachelor of Science degree in Kinesiology. Students may choose to specialize in Teacher Preparation (K–12 Physical Education and Coaching) or Kinesiology (Sport Psychology, Fitness and Sport Management, Sport Performance, Clinical Exercise and Athletic Training).

Academic advising for students seeking the Kinesiology degree is available in the College of Education and Human Development Advising and Certification Center.

**Teacher Preparation Emphasis**

The minimum number of semester credit hours for this degree, including the Core Curriculum requirements, is 124, of which at least 39 must be at the upper-division level.

All candidates for the degree must complete the following:

**Core Curriculum requirements:** Students seeking the Bachelor of Science degree in Kinesiology with the emphasis in Teacher Preparation must fulfill University Core Curriculum requirements. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rhetoric</strong> (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement: ENG 1013 Freshman Composition ENG 1023 Discourse across the Disciplines</td>
</tr>
</tbody>
</table>
Degree Requirements

A. 43 semester credit hours of required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTH 2523</td>
<td>First Aid and Safety</td>
</tr>
<tr>
<td>KIN 2001</td>
<td>Skill Analysis in Physical Activity: Individual Activities</td>
</tr>
<tr>
<td>KIN 2101</td>
<td>Skill Analysis in Physical Activity: Team Sports</td>
</tr>
<tr>
<td>KIN 2201</td>
<td>Skill Analysis in Physical Activity: Dual Sports</td>
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<tr>
<td>KIN 2301</td>
<td>Skill Analysis in Physical Activity: Track and Field</td>
</tr>
<tr>
<td>KIN 2303</td>
<td>Cultural and Scientific Foundations</td>
</tr>
<tr>
<td>KIN 2401</td>
<td>Gymnastics and Fitness Training</td>
</tr>
<tr>
<td>KIN 2411</td>
<td>Rhythmic Activities and Dance</td>
</tr>
<tr>
<td>KIN 2421</td>
<td>Outdoor Activities and Lifetime Sports</td>
</tr>
<tr>
<td>KIN 2423</td>
<td>Management and Organization in Kinesiology and Sports</td>
</tr>
<tr>
<td>KIN 3003</td>
<td>Computer Applications in Kinesiology and Health</td>
</tr>
<tr>
<td>KIN 3303</td>
<td>Athletic Injuries and Training Procedures</td>
</tr>
<tr>
<td>KIN 3313</td>
<td>Anatomy and Physiology for Kinesiology</td>
</tr>
<tr>
<td>KIN 3323</td>
<td>Biomechanics</td>
</tr>
<tr>
<td>KIN 3433</td>
<td>Exercise Physiology</td>
</tr>
<tr>
<td>KIN 3443</td>
<td>Fitness Testing and Exercise Prescription</td>
</tr>
<tr>
<td>KIN 4103</td>
<td>Motor Development</td>
</tr>
<tr>
<td>KIN 4113</td>
<td>Evaluation</td>
</tr>
<tr>
<td>KIN 4403</td>
<td>Motor Learning</td>
</tr>
</tbody>
</table>

Domain I: Mathematics and Science

<table>
<thead>
<tr>
<th>Mathematics (3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science (6 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1113 (&amp; 1122 as support work)</td>
</tr>
<tr>
<td>Any additional three hours listed under the Level 2 section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

Domain II: Society and Culture

<table>
<thead>
<tr>
<th>United States History and Diversity (6 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any six hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Political Studies (6 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social and Behavioral Sciences (3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Economics (3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

Domain III: Literature and the Arts

<table>
<thead>
<tr>
<th>Literature (3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Arts (3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

Domain IV: Interdisciplinary Studies

<table>
<thead>
<tr>
<th>(3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>
18 semester credit hours of professional preparation courses:

KIN 2123 Fitness and Wellness Concepts
KIN 3413 Tactics
KIN 4123 Psychosocial Aspects of Exercise and Sport
KIN 4423 Developmental/Adaptive Physical Activity
KIN 4343 Movement Awareness
KIN 4413 Coaching Athletics

C. 6 semester credit hours of support work for certification:

COM 2123 Oral Interpretation
English literature elective at the 2000 level or above

D. 15 semester credit hours of Professional Education and Reading coursework:

EDU 2103 Education in American Society
EDP 3203 Learning and Development in the Secondary School Adolescent
RDG 3773 Introduction to Content Area Reading-Elementary*
KIN 4203 Teaching Secondary Physical Education*
KIN 4303 Teaching Elementary Physical Education*

*Restricted class/advisor authorization issued only if all prerequisites have been completed.

TASP requirements must be satisfied before enrolling in Professional Education and Student Teaching coursework.

Student Teaching Component

The following student teaching requirement is not required for the degree in Kinesiology. Student teaching or an alternative to student teaching is required in order to meet the experiential requirements of the teacher certificate.

C&I 4666 Student Teaching: All Level Physical Education

Recommended Course Sequence

<table>
<thead>
<tr>
<th>Year 1 – Fall</th>
<th>Year 1 – Spring</th>
<th>Year 2 – Fall</th>
<th>Year 2 – Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Curriculum</td>
<td>Core Curriculum</td>
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<td>Core Curriculum</td>
</tr>
<tr>
<td>ENG 1013 History</td>
<td>ENG 1023 History</td>
<td>Political Studies</td>
<td>Political Studies</td>
</tr>
<tr>
<td>MATH</td>
<td>Soc./Behav. Sci.</td>
<td>ENG 2013 Interdis. Studies</td>
<td>Economics</td>
</tr>
<tr>
<td>BIO 1113</td>
<td>Level II Science</td>
<td>COM 2123 KIN 2123</td>
<td>The Arts</td>
</tr>
<tr>
<td>KIN 2303</td>
<td>HTH 2523</td>
<td></td>
<td>English Lit</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>EDU 2103</td>
</tr>
<tr>
<td>Year 3 – Fall</td>
<td>Year 3 – Spring</td>
<td>Year 4 – Fall</td>
<td>Year 4 – Spring</td>
</tr>
<tr>
<td>KIN 2001, 2101,2421</td>
<td>KIN 2201, 2301</td>
<td>KIN 2401,2411</td>
<td>KIN 4123</td>
</tr>
<tr>
<td>KIN 2423</td>
<td>KIN 3433</td>
<td>KIN 4113</td>
<td>KIN 4423</td>
</tr>
<tr>
<td>KIN 3003</td>
<td>KIN 3323</td>
<td>RDG 3773</td>
<td>KIN 4403</td>
</tr>
<tr>
<td>KIN 3413</td>
<td>KIN 3303</td>
<td>KIN 3443</td>
<td>KIN 4413</td>
</tr>
<tr>
<td>KIN 3313</td>
<td>EDP 3203</td>
<td>KIN 4203</td>
<td>KIN 4413</td>
</tr>
<tr>
<td></td>
<td>KIN 4343</td>
<td>KIN 4103</td>
<td>KIN 4303</td>
</tr>
</tbody>
</table>
Kinesiology Emphasis

The minimum number of semester credit hours for this degree, including the Core Curriculum requirements, is 122, of which at least 39 must be at the upper-division level.

All candidates for the degree must complete the following:

**Core Curriculum requirements:** Students seeking the Bachelor of Science degree in Kinesiology with the Kinesiology emphasis must fulfill University Core Curriculum requirements. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

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</tr>
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</tr>
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<td><strong>United States History and Diversity</strong> (6 semester credit hours) Any six hours listed under this section in the list of core courses will satisfy this core requirement. <strong>Political Studies</strong> (6 semester credit hours) POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement. <strong>Social and Behavioral Sciences</strong> (3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement. <strong>Economics</strong> (3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
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<td><strong>Domain III: Literature and the Arts</strong></td>
<td><strong>Literature</strong> (3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement. <strong>The Arts</strong> (3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td><strong>Domain IV: Interdisciplinary Studies</strong></td>
<td>(3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>
Degree Requirements

A. 43 semester credit hours of foundation courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTH 2523</td>
<td>First Aid and Safety</td>
</tr>
<tr>
<td>KIN 2001</td>
<td>Skill Analysis in Physical Activity: Individual Activities</td>
</tr>
<tr>
<td>KIN 2101</td>
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<td>KIN 2411</td>
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<td>KIN 2421</td>
<td>Outdoor Activities and Lifetime Sports</td>
</tr>
<tr>
<td>KIN 2423</td>
<td>Management and Organization in Athletics and Sports</td>
</tr>
<tr>
<td>KIN 3003</td>
<td>Computer Applications in Kinesiology and Health</td>
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<td>KIN 3323</td>
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</tr>
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<td>KIN 4113</td>
<td>Evaluation</td>
</tr>
<tr>
<td>KIN 4403</td>
<td>Motor Learning</td>
</tr>
</tbody>
</table>

B. 9 semester credit hours of professional preparation courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>KIN 4023</td>
<td>Exercise Psychology</td>
</tr>
<tr>
<td>KIN 4936</td>
<td>Internship in Kinesiology</td>
</tr>
</tbody>
</table>

C. 13 semester credit hours of support courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHS 2083, 2091</td>
<td>Human Biology: Anatomy and Laboratory</td>
</tr>
<tr>
<td>AHS 2103, 2111</td>
<td>Human Physiology and Laboratory</td>
</tr>
<tr>
<td>BIO 1122</td>
<td>Laboratory Investigations in Biology</td>
</tr>
<tr>
<td>COM 2123</td>
<td>Oral Interpretation</td>
</tr>
</tbody>
</table>

D. 15 semester credit hours of application courses predetermined and approved by an academic advisor in the College of Education and Human Development Advising and Certification Center.

Recommended Course Sequence

<table>
<thead>
<tr>
<th>Year 1 – Fall</th>
<th>Year 1 – Spring</th>
<th>Year 2 – Fall</th>
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</thead>
<tbody>
<tr>
<td>Core Curriculum</td>
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<td>Core Curriculum</td>
</tr>
<tr>
<td>ENG 1013</td>
<td>ENG 1023</td>
<td>Political Studies</td>
<td>Political Studies</td>
</tr>
<tr>
<td>History</td>
<td>History</td>
<td>ENG 2013</td>
<td>Economics</td>
</tr>
<tr>
<td>MATH</td>
<td>Soc./Behav. Sci.</td>
<td>Interdisciplinary</td>
<td>The Arts</td>
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<td>BIO 1113, 1122</td>
<td>Level II Science</td>
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<tr>
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<td>KIN 2303</td>
<td>HTH 2523</td>
<td>AHS 2103, 2111</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<th>Year 4 – Fall</th>
<th>Year 4 – Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>KIN 2001, 2101, 2201</td>
<td>KIN 2301, 2401, 2411</td>
<td>KIN 2421</td>
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<td>KIN 2423</td>
<td>KIN 3433</td>
<td>KIN 3443</td>
<td>KIN 4403</td>
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<tr>
<td>KIN 3003</td>
<td>KIN 3323</td>
<td>KIN 4103</td>
<td>KIN Application</td>
</tr>
<tr>
<td>KIN 3303</td>
<td>KIN 4023</td>
<td>KIN 4113</td>
<td>KIN Application</td>
</tr>
<tr>
<td>KIN 3313</td>
<td>KIN Application</td>
<td>KIN Application</td>
<td>KIN Application</td>
</tr>
</tbody>
</table>
Minor in Nonprofit Management

The Minor in Nonprofit Management provides the opportunity to prepare for leadership positions in youth, environmental, medical, arts, and other nonprofit agencies. In addition to the formal courses, students minoring in nonprofit management are expected to actively participate in the American Humanics Student Organization, an integral part of their training.

All students pursuing a Minor in Nonprofit Management must complete 22 semester credit hours.

ACC 2003 Foundations of Accounting
or
ACC 2013 Principles of Accounting I

MGT 3803 Strategic Management of Nonprofit Organizations
or
MGT 3013 Introduction to Organization Theory, Behavior, and Management

MKT 3013 Principles of Marketing
NPO 3003 Fundraising in Nonprofit Agencies
NPO 3013 Introduction to Nonprofit Agencies
NPO 4901 American Humanics Management Institute

NPO 4933 Internship in Nonprofit Management (2 semesters)
or
NPO 4936 Internship in Nonprofit Management

To declare a Minor in Nonprofit Management, obtain advice, obtain lists of relevant courses, or seek approval of substitutions for course requirements, students should consult the director of the Nonprofit Management Program in the Department of Health and Kinesiology.

COURSE DESCRIPTIONS

HEALTH (HTH)

1001 Freshman Topics in Health
(1-1) 1 hour credit.
Required for entering freshmen in the College of Education and Human Development with less than 15 hours of coursework and who are interested in majoring in Health. Critical study of topics in health. Innovative classroom and learning techniques are used to introduce students to these topics and to help strengthen critical thinking, problem solving, and writing skills. A maximum of 3 semester credit hours of freshman topics courses may apply to a bachelor’s degree, although this specific topic may be taken only once.

2133 Health and Environmental Safety
(3-0) 3 hours credit.
This course is designed to provide teacher certification students with developmentally appropriate knowledge and skills in health and environmental safety. It will address health-related issues in personal, interpersonal, and community settings. It will also inform students about how to create a safe teaching environment.

2513 Personal Health Management
(3-0) 3 hours credit.
Emphasizes the concept of mind, body, and spirit as necessary components of total well-being; principles of preventive health; and self-responsibility for personal health behaviors. (Formerly KAH 2513. Credit cannot be earned for both HTH 2513 and KAH 2513.)
2523 **First Aid and Safety**  
(3-0) 3 hours credit.  
Study and practices of current first aid and safety skills. Emphasis on application of skills in emergency situations. Opportunity to earn Texas Department of Health Emergency Care Attendant Certificate. (Formerly KAH 4543. Credit cannot be earned for both HTH 2523 and KAH 4543. [TCCN: PHED 1306.])

3503 **Foundations of Health Theory**  
(3-0) 3 hours credit.  
Designed for the health education major to provide an overview of current trends, research, literature, and health behavior models. (Formerly KAH 2503. Credit cannot be earned for both HTH 3503 and KAH 2503.)

3513 **Issues in Community Health**  
(3-0) 3 hours credit. Prerequisite: HTH 3503.  
Study of community health problems and the function and organization of public, private, and voluntary health agencies. (Formerly KAH 3513. Credit cannot be earned for both HTH 3513 and KAH 3513.)

3523 **Worksite Health Promotion**  
(3-0) 3 hours credit. Prerequisite: HTH 3503 or KIN 2303.  
Organization, administration, and supervision of health programs in the community, school, business, or industry setting. (Formerly KAH 3523. Credit cannot be earned for both HTH 3523 and KAH 3523.)

3533 **Drugs and Health**  
(3-0) 3 hours credit.  
Study of the use and abuse of drugs and other substances. Examines addiction, dependence, tolerance, motivation for use, and effects of substance abuse on health and society. (Formerly KAH 3533. Credit cannot be earned for both HTH 3533 and KAH 3533.)

3543 **Growth and Development**  
(3-0) 3 hours credit.  
Physical, social, and psychological development throughout the life cycle. Emphasis on changes in early adolescence and their implications for health professionals. (Formerly KAH 3543. Credit cannot be earned for both HTH 3543 and KAH 3543.)

3553 **Emotional Wellness**  
(3-0) 3 hours credit.  
Practical application of techniques for shaping healthier emotional behavior; emphasis on personality, stress management, and fulfilling relationships.

4503 **Survey of Human Disease**  
(3-0) 3 hours credit.  
An in-depth look at the etiology, prevention, and treatment of chronic and contagious diseases afflicting humans.

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 for making responsible decisions when selecting professional health care services and products. (Formerly KAH 4513. Credit cannot be earned for both HTH 4513 and KAH 4513.)

4523 **Understanding Human Sexuality**  
(3-0) 3 hours credit.  
Study of the psychosocial and physical aspects of human sexuality and their impact on our lives. (Formerly KAH 4523. Credit cannot be earned for both HTH 4523 and KAH 4523.)
4533 Nutrition and Health
(3-0) 3 hours credit.
A practical approach to understanding the principles of nutrition and their effect on health and fitness. (Formerly KAH 4533. Credit cannot be earned for both HTH 4533 and KAH 4533.)

4543 Environmental Health and Safety
(3-0) 3 hours credit.
Intensive coverage of the aspects of a human being’s health and safety in a changing environment. Considers applicable factors of ecology, including problems related to water, waste, pesticides, foods, radiation, population, and other aspect of the total ecosystem, as well as personal and occupational safety within these parameters.

4911-3 Independent Study
1 to 3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, and the Department Chair 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4936 Internship in Health
6 hours credit. Prerequisites: 18 semester credit hours of health coursework and permission of the advisor.
The opportunity for work experience in a private or public health-related agency. Opportunities are developed in consultation with faculty advisor and on-site coordinator. No more than 6 semester credit hours of internship will apply to a bachelor’s degree. (Credit cannot be earned for both HTH 4936 and KAH 4956.)

4953 Special Studies in Health
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Organized course offering the opportunity for specialized study in an area of health not available as part of the regular course offerings. Special studies may be repeated for credit when topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4993 Honors Thesis
3 hours credit. Prerequisite: Prerequisites: Enrollment limited to candidates for honors in the Department of Health and Kinesiology during the last two semesters; consent of the Honors College.
Supervised research and preparation of an honors thesis. May be repeated once for credit with advisor’s approval.

COURSE DESCRIPTIONS
KINESIOLOGY (KIN)

1001 Individual Physical Activities
(0-3) 1 hour credit.
Practice in the techniques of individual physical activities. Sections focus on particular sports or fitness activities as indicated in the Schedule of Classes. May be repeated for credit, but not more than 6 semester credit hours of KIN 1001 or KAH 1001, alone or in combination with KIN 1101 or KAH 1101, will apply to a bachelor’s degree.

1011 Freshman Topics in Kinesiology
(1-1) 1 hour credit.
Required for entering freshmen in the College of Education and Human Development with less than 15 hours of coursework and who are interested in majoring in Kinesiology. Critical study of topics in kinesiology. Innovative classroom and learning techniques are used to introduce students to these topics and to help strengthen critical thinking, problem solving, and writing skills. A maximum of 3 semester credit hours of freshman topics courses may apply to a bachelor’s degree, although this specific topic may be taken only once.
1101 **Team Sports**  
(0-3) 1 hour credit.  
Practice in the techniques of team sports. Sections focus on particular sports as indicated in the Schedule of Classes. May be repeated for credit, but not more than 6 semester credit hours of KIN 1101 or KAH 1101, alone or in combination with KIN 1001 or KAH 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, regulations, and skill performance in a variety of selected individual activities. (Formerly KAH 2001. Credit cannot be earned for both KIN 2001 and KAH 2001.)

2101 **Skill Analysis in Physical Activity: Team Sports**  
(0-3) 1 hour credit.  
Specialized activity instruction involving skills, drills, rules, regulations, and skill performance in a variety of selected team sports. (Formerly KAH 2101. Credit cannot be earned for both KIN 2101 and KAH 2101.)

2123 **Fitness and Wellness Concepts**  
(3-0) 3 hours credit  
This course is designed to provide students with developmentally appropriate knowledge and skill in fitness and wellness. Part one of the course will address health-related issues in personal, interpersonal, and community settings. The second part of the course will discuss the developmental and acquisition of motor-perceptual and sport skills. (Formerly IDS 2123. Credit cannot be earned for both KIN 2123 and IDS 2123)

2201 **Skill Analysis in Physical Activity: Dual Sports**  
(0-3) 1 hour credit.  
Specialized activity instruction involving skills, drills, rules, regulations, and skill performance in a variety of selected dual sports.

2301 **Skill Analysis in Physical Activity: Track and Field**  
(0-3) 1 hour credit.  
Specialized activity instruction involving skills, drills, rules, regulations, and skill performance in a variety of selected track and field events.

2303 **Cultural and Scientific Foundations**  
(3-0) 3 hours credit.  
Study of philosophy, ethics, sociology, scientific areas, and current concepts relevant to the discipline of kinesiology. (Formerly KAH 2303. Credit cannot be earned for both KIN 2303 and KAH 2303.) [TCCN: KINS 1301.]

2401 **Gymnastics and Fitness Training**  
(0-3) 1 hour credit.  
Practice in gymnastic and fitness activities for the kinesiology major. (Formerly KAH 2401. Credit cannot be earned for both KIN 2401 and KAH 2401.)

2411 **Rhythmlcal Activities and Dance**  
(0-3) 1 hour credit.  
Practice in rhythmical techniques and various types of dance. (Formerly KAH 2411. Credit cannot be earned for both KIN 2411 and KAH 2411.)

2421 **Outdoor Activities and Lifetime Sports**  
(1-2) 1 hour credit. Prerequisite: HTH 2523.  
Practice in outdoor activities and life sports. Weekend class field trips required. Laboratory fee will be assessed. (Formerly KIN 2433 and KAH 2433. Credit cannot be earned for both KIN 2421 and either KIN 2433 or KAH 2433.)
2423 Management and Organization in Kinesiology and Sports  
(3-0) 3 hours credit. 
Introduction to concepts and skills that will prepare the student to become an effective leader of physical fitness, sport and health, and physical education programs. [TCCN: PHED 1336.]

3003 Computer Applications in Kinesiology and Health  
(3-0) 3 hours credit. Prerequisites: KIN 2303 or HTH 3503. 
Application of computer and multimedia technology in Kinesiology and Health disciplines.

3303 Athletic Injuries and Training Procedures  
(3-0) 3 hours credit. Prerequisite: HTH 2523. 
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. Organization of the training room facility. (Formerly KAH 3303. Credit cannot be earned for both KIN 3303 and KAH 3303.)

3313 Anatomy and Physiology for Kinesiology  
(2-2) 3 hours credit. Prerequisite: KIN 2303 or HTH 3503. 
Study of human anatomy and physiology of the cardiovascular, respiratory, musculoskeletal, nervous, and endocrine systems. Emphasis will be placed on anatomy and physiology used in the science of kinesiology. (Formerly AHS 3113. Credit cannot be earned for both KIN 3313 and AHS 3113.)

3323 Biomechanics  
(2-2) 3 hours credit. Prerequisite: KIN 3313. 
The study of the human body in sports motion and sport objects in motion. The application of mechanical principles, kinematics, and kinetics.

3413 Tactics  
(3-0) 3 hours credit. Prerequisite: KIN 2303. 
Administration of games, sports, and physical fitness activities for the adolescent through adulthood. Some fieldwork experience may be required. (Formerly KAH 3413. Credit cannot be earned for both KIN 3413 and KAH 3413.)

3433 Exercise Physiology  
(2-2) 3 hours credit. Prerequisites: KIN 3313 or AHS 2103 and AHS 2111. 
A study of the adaptation and effects of the body to physiological stress. Emphasis will be placed on the physiology of training, metabolism and work capacity, and electrocardiography. (Formerly HTH 4133. Credit cannot be earned for both KIN 3433 and HTH 4133.)

3443 Fitness Testing and Exercise Prescription  
(2-2) 3 hours credit. Prerequisite: KIN 3433 
Analysis of the nature of physical fitness, basic principles and concepts of exercise and fitness, and the development and implementation of individually prescribed exercise training programs. An individual fitness requirement is mandatory for passing the course. (Formerly KAH 3443. Credit cannot be earned for both KIN 3443 and KAH 3443.)

4023 Exercise Psychology  
(3-0) 3 hours credit. Prerequisite: KIN 2303. 
An investigation of psychological processes and behaviors related to participation in exercise and physical activities. Psychological effects of exercise, motives for fitness, exercise adherence, and fitness counseling.

4103 Motor Development  
(3-0) 3 hours credit. Prerequisite: KIN 2303 or HTH 3503. 
A study of motor, physical, and neuromuscular development across the human life span. Effects of social, cognitive, growth and maturation, and aging factors on motor development will be addressed. Some fieldwork experience may be required.
4113 Evaluation
(3-0) 3 hours credit. Prerequisites: KIN 3003 and completion of Core Curriculum requirement in mathematics. Application of test, measurement, and evaluation theory. Emphasis is on proper selection and administration of tests and appropriate evaluation of test results using basic statistical procedures. (Formerly KAH 4113. Credit cannot be earned for both KIN 4113 and KAH 4113.)

4123 Psychosocial Aspects of Exercise and Sport
(3-0) 3 hours credit. Prerequisite: KIN 2303. A study of human behavior in exercise and sport. Motivation in sport, performance enhancement, sport personalogy, exercise adherence, and cognitive and affective effects of exercise.

4143 Advanced Athletic Training
(2-2) 3 hours credit. Prerequisite: KIN 3303. This course deals in depth with issues related to athletic training, including assessment of injuries, and proper taping and wrapping techniques. A two-hour laboratory will accompany this class. Laboratory fee will be assessed.

4203 Teaching Secondary Physical Education
(2-2) 3 hours credit. Prerequisites: KIN 3413 and KIN 4343. Examination of current trends, issues, and pedagogical approaches to the teaching and learning of physical education in the Secondary school curriculum. Contemporary programming, problem-solving, and community outreach activities will be emphasized. Twenty-five hours of directed field experiences at the secondary school level are required. Restricted course; advisor code required for registration.

4223 Advanced Topics in Exercise and Sport Psychology
(3-0) 3 hours credit. Prerequisite: KIN 4023 or KIN 4123. In-depth study of exercise and sport psychology, emphasizing research methods, theoretical models, performance enhancement techniques and professional issues.

4233 Advanced Topics in Exercise Physiology and Fitness Testing
(2-2) 3 hours credit. Prerequisites: KIN 3433 and KIN 3443. In-depth study of exercise physiology, emphasizing application of physiological principles of training for physical fitness and sport performance, graded exercise testing, and professional issues.

4243 Musculoskeletal and Cardiopulmonary Rehabilitation
(2-2) 3 hours credit. Prerequisites: KIN 3443 and KIN 3303. This course examines various therapeutic exercise modalities and programs used in the treatment and rehabilitation of athletic injuries, cardiovascular and pulmonary diseases.

4303 Teaching Elementary Physical Education
(2-2) 3 hours credit. Prerequisites: KIN 3413 and KIN 4343. Examination of current trends, issues, and pedagogical approaches to the teaching and learning of physical education in the Elementary school curriculum. Contemporary programming, problem-solving, and community outreach activities will be emphasized. Twenty-five hours of directed field experiences at the elementary school level are required. Restricted course; advisor code required for registration.

4343 Movement Awareness
(3-0) 3 hours credit. Prerequisite: KIN 2303. Study of concepts of movement awareness and the elements of movement that are the basis of all movement capacities. Application of these concepts to the learning of motor skills will be included. (Formerly KAH 4343. Credit cannot be earned for both KIN 4343 and KAH 4343.)

4403 Motor Learning
(2-2) 3 hours credit. Prerequisite: KIN 3313. Functional applications of motor control and learning theory in skill instruction and sports performance. Motor learning laboratory required. Laboratory fee will be assessed. (Formerly KAH 4403. Credit cannot be earned for both KIN 4403 and KAH 4403.)
4413  Coaching Athletics  
(3-0) 3 hours credit. Prerequisite: KIN 2303.  
Theory of coaching relevant to athletics. Emphasis on organization and content involved in coaching a variety of sports. (Formerly KAH 4413. Credit cannot be earned for both KIN 4413 and KAH 4413.)

4423  Developmental/Adaptive Physical Activity  
(3-0) 3 hours credit. Prerequisite: KIN 4103 or consent of instructor.  
A developmental approach to the study of disabilities in physical activity. Legislation, pathologies, and adaptation principles. Class field trips required. (Formerly KAH 4423. Credit cannot be earned for both KIN 4423 and KAH 4423.)

4913-3 Independent Study  
1 to 3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the Department Chair 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4936  Internship in Kinesiology  
6 hours credit. Prerequisite: Consent of instructor.  
Supervised internship with appropriate agency in the field of kinesiology and sport management.

4943  Practicum in Kinesiology  
3 hours credit. Prerequisite: Consent of instructor.  
Supervised practicum with appropriate agency in the field of kinesiology. May be repeated for credit to a maximum of 6 semester credit hours.

4953  Special Studies  
(3-0) 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 may be repeated for credit when topics vary, but not more than 6 semester credit 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 the Department of Health and Kinesiology during the last two semesters; consent of the Honors College.  
Supervised research and preparation of an honors thesis. May be repeated once for credit with advisor’s approval.

COURSE DESCRIPTIONS  
NONPROFIT MANAGEMENT  
(NPO)

3003  Fundraising in Nonprofit Agencies  
(3-0) 3 hours credit.  
Examines methods, techniques, and directed experience in fundraising for youth, environmental, medical, arts and other not-for-profit agencies. Explores relationships with umbrella organizations, government funding, grantsmanship, budget control, and accountability. (Formerly YHS 3003. Credit cannot be earned for both NPO 3003 and YHS 3003.)

3013  Introduction to Nonprofit Agencies  
(3-0) 3 hours credit.  
An overview of the historical background, development, role, auspices, organization, and purposes of nonprofit agencies. Special emphasis is placed on structure, program, financing, policies, organizational management, planning and stewardship, fundraising, community building, volunteer services, and problems which confront these
organizations. Group and individual projects, service learning, research conducted for specific nonprofit agencies, oral presentations, networking, and construction of a formal portfolio of nonprofit work experiences and deliverables are modalities utilized in this course. (Formerly YHS 1003 and YHS 3013. Credit cannot be earned for both NPO 3013 and YHS 1003 or YHS 3013.)

4901 American Humanics Management Institute
1 hour credit.
A one-hour course requiring students to help raise the funds to pay the group expenses to attend one American Humanics Management Institute, a 4-day conference and simulation exercise where students have the opportunity to apply what they have studied about managing nonprofit organizations. May be repeated once for credit. (Formerly YHS 4901. Credit cannot be earned for both NPO 4901 and YHS 4901.)

4933, 6 Internship in Nonprofit Management
3 or 6 hours credit. Prerequisite: Approval of Nonprofit Management Director.
Supervised experience within selected not-for-profit agencies. May be repeated for credit, but not more than 6 semester credit hours may be earned through the internship. (Formerly YHS 4933 and YHS 4936. Credit cannot be earned for both NPO 4933 and YHS 4933 or for both NPO 4936 and YHS 4936.)
DEPARTMENT OF INTERDISCIPLINARY STUDIES AND CURRICULUM AND INSTRUCTION

Degree Only Option

The Department of Interdisciplinary Studies and Curriculum and Instruction offers a Bachelor of Arts in Interdisciplinary Studies. The Bachelor of Arts in Interdisciplinary Studies (IDS) degree-only option may be used as preparation for careers in government service or work with youth in a non-teaching capacity, or as an opportunity to prepare for graduate or professional study in areas such as business, counseling, or social work. The minimum number of semester credit hours required for the B.A. in IDS degree-only option, including the Core Curriculum requirements, is 120, at least 39 of which must be at the upper-division level. Students selecting this option also choose an academic specialization. See the section entitled “Degree Program” for a listing of the requirements for this degree.

Degree with Certification Options

Students who choose the IDS major can also seek teacher certification. The IDS program is designed to give successful students the opportunity to become teachers who understand their own thinking and learning processes and can successfully foster children’s conceptual, intellectual, and affective growth. Within the Department of Interdisciplinary Studies and Curriculum and Instruction, IDS majors who select a teacher certification option can choose from either of two options: the early childhood–grade 4 generalist certification (EC–4) or grades 4–8 generalist certification. Students seeking either of these certifications can also obtain the PK–12 Generic Special Education endorsement. For additional information regarding requirements for either of these certifications, students should consult the section of this catalog entitled “Degree Program with Teacher Certification Options.” They should also consult with an advisor in the College of Education and Human Development (COEHD) Advising and Certification Center for information regarding certification requirements and for information on admission to the teacher certification program.

IDS majors seeking bilingual certification for EC–4 or 4–8 should refer to the section of this catalog entitled Bicultural-Bilingual Studies.

Secondary Certification

The Department of Interdisciplinary Studies and Curriculum and Instruction offers coursework required for students seeking secondary certification (grades 8–12). Students seeking certification to teach at the secondary level must obtain a bachelor’s degree in the academic area in which they plan to teach. They should consult with an advisor in the college in which their degree is contained. They should also consult with an advisor in the COEHD Advising and Certification Center for information regarding secondary certification requirements and for information on admission to the teacher certification program. For additional information regarding secondary certification requirements, students should consult the section of this catalog entitled “Secondary Certification.”

Generic Special Education Endorsement

The PK–12 Generic Special Education endorsement is available for students seeking EC–4 certification, grades 4–8 certification, or grades 8–12 certification. Coursework for this endorsement has been sequenced, and all courses must be taken concurrently during the indicated semester:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>SPE 3603, 3643, and 3653</td>
</tr>
<tr>
<td>Spring</td>
<td>SPE 3623, 3633, and 3663</td>
</tr>
<tr>
<td>Summer</td>
<td>SPE 4603 and 4653</td>
</tr>
</tbody>
</table>

Students seeking the Special Education endorsement should consult with an advisor in the COEHD Advising and Certification Center for additional information regarding endorsement requirements and the way in which the required coursework should be integrated into their certification plan. Generic special education is also available as an academic specialization for students seeking the Bachelor of Arts Degree in Interdisciplinary Studies (degree-only option).
DEPARTMENT HONORS

The Department of Interdisciplinary Studies and Curriculum and Instruction awards Department Honors to certain outstanding students and provides the opportunity for advanced study under close faculty supervision.

Selection for honors designation is based on the student’s academic performance and recommendation by the faculty of the student’s major discipline. To be eligible for the program, students must have a minimum overall grade point average of 3.0 at UTSA and a minimum grade point average of 3.5 in their major at UTSA. The minimum grade point averages must be maintained for students to receive the approval of the Department Honors Committee and the discipline faculty. Students applying for Department Honors are expected to enroll in the appropriate honors thesis course during their final two semesters. The completed thesis must be approved by the supervising faculty sponsor and another departmental faculty member. Students interested in this program should contact their professors for additional information.

Bachelor of Arts Degree in Interdisciplinary Studies (degree-only option)

The minimum number of semester credit hours required for this degree is 120, at least 39 of which must be at the upper-division level.

The IDS degree-only option is NOT intended for students who plan to obtain teacher certification. Students who complete the IDS degree-only option and then decide to return to UTSA for teacher certification must complete remaining requirements of the IDS degree with teacher certification.

Core Curriculum requirements: Students seeking the Bachelor of Arts degree in Interdisciplinary Studies must fulfill University Core Curriculum requirements. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | Mathematics (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
Science (6 semester credit hours)  
Three hours from Level One and three hours from Level Two will satisfy this core requirement. |
| **Domain II: Society and Culture** | United States History and Diversity (6 semester credit hours)  
Any six hours listed under this section in the list of core courses will satisfy this core requirement.  
Political Studies (6 semester credit hours)  
POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.  
Social and Behavioral Sciences (3 semester credit hours)  
Any six hours listed under this section in the list of core courses will satisfy this core requirement.  
Economics (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
Degree Requirements (18 semester credit hours):

IDS 2103 Individual, Family, and Community
IDS 2113 Society and Social Issues
IDS 2203 World Civilization to the Fifteenth Century
IDS 2213 World Civilization since the Fifteenth Century
IDS 2713 Modes of Inquiry across the Fields of Study
IDS 3003 Science and Humanity

Area of Specialization (18 – 27 semester credit hours)

One of the following areas of specialization must be selected by the student. Assistance in selection is available from the COEHD Advising and Certification Center. Students are encouraged to select their area of specialization as early in their program as possible.

Listed courses are required unless a choice has been given or unless specifically indicated. Electives should be approved by an academic advisor before enrollment.

Art. 30 semester credit hours: ART 1003, 1013, 1213, 1223, 2113, 2413, 2713, 3113, 4433, and 4753

Biology. 19 semester credit hours: AHS 1053; BIO 1033, 1203, 1122, 3283, and 3292; and 3 hours of upper-division electives in biology

English. 18 semester credit hours: ENG 2263, 3303, and 3333; 9 semester credit hours of electives in English, 6 of which must be at the upper-division level (ENG 4933 may not be used to meet this requirement)

French. 18 semester credit hours: FRN 2013 and 2023; FRN 3023, and 9 semester credit hours of upper-division electives in French (FRN 4933 may not be used to meet this requirement)

Generic special education. Coursework for this specialization has been sequenced, and all courses must be taken concurrently during the indicated semester. The sequence begins in the Fall Semester. 18 semester credit hours of the following Special Education classes are required for the degree:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>SPE 3603, 3643, and 3653</td>
</tr>
<tr>
<td>Spring</td>
<td>SPE 3623, 3633, and 3663</td>
</tr>
<tr>
<td>Summer</td>
<td>SPE 4603 and 4653</td>
</tr>
</tbody>
</table>

Geography. 18 semester credit hours: GRG 1013, 2613, 2623, 3113, 3153, and 3 semester credit hours of upper-division electives in geography

German. 18 semester credit hours: GER 2013 and 2023; GER 3023 or 3053; GER 3413 or 3423; and 6 semester credit hours of upper-division electives in German (GER 4933 may not be used to meet this requirement)
Health. 18 semester credit hours: HTH 2513, 2523, 3503, 3533, 4513, 4523, and 4533

History. 18 semester credit hours: HIS 2053; HIS 2533, 2553, or 2573; AMS 3043, HIS 3113, HIS 3163, HIS 3443, or HIS 3463; 6 semester credit hours of upper-division electives in U.S. history; and 3 semester credit hours of upper-division electives in non-U.S. history

Kinesiology. 18 semester credit hours: KIN 2123, 2303, 3413, 4103, 4343 and 3 hrs from the following: KIN 2001, 2101, 2201, 2301, 2401, 2411

Life-earth science. 25 to 27 semester credit hours: BIO 1033, 1113, 1122, 3283, and 3292; GEO 1103, 1111, 1123, and 1131; BIO 3003 or GEO 3163; and 1 to 3 semester credit hours of upper-division electives in biology

Mathematics. The Core Curriculum mathematics requirement for this specialization is MAT 1214. 18 semester credit hours are required: MAT 3113, 3123, 3233, 4113, and 4123; STA 1053

Music. A background in music and an audition with music faculty are required before this specialization can be declared. 18 semester credit hours: MUS 1531, 2623, 2683, and 3453; 8 semester credit hours from the following, of which 3 hours must be upper-division: MUS 1521, 2603, 2663, 2673, 3463 (strongly recommended), 3712 (4 hours maximum), and 3721 (2 hours maximum)

Physical science. The Core Curriculum mathematics requirement for this specialization is MAT 1214. 26 semester credit hours are required: CHE 1103, 1122, 1303, 1312, 2203, 2242, and 2251; PHY 1904, 1911, 1924, and 1931

Spanish. The Prochievement examination should be taken before registering for any Spanish specialization coursework. 18 semester credit hours: 6 semester credit hours from SPN 2006, 2013, 2023, 2103, 2513, or 2523; 3 semester credit hours from SPN 3613, 3623, 3653, or 3663; 6 semester credit hours from SPN 3033, 3043, or 3063; and SPN 3113.

Electives (33 to 42 semester credit hours)
Advisors in the COEHD Advising and Certification Center will assist interdisciplinary studies – degree only majors to use their electives to develop a coherent program of study using existing UTSA course offerings. Possible options include outside fields in business, prelaw, predental, and premedical studies.

### DEGREE PROGRAM WITH TEACHER CERTIFICATION OPTIONS

**Bachelor of Arts Degree in Interdisciplinary Studies (Early Childhood–Grade 4 generalist certification option)**

The minimum number of semester credit hours required for the IDS degree with Early Childhood–Grade 4 generalist certification is 129, at least 39 of which must be at the upper-division level.

**Core Curriculum requirements:** Students seeking the Bachelor of Arts degree in Interdisciplinary Studies with teacher certification must fulfill University Core Curriculum requirements. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Rhetoric (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement: ENG 1013 Freshman Composition ENG 1023 Discourse across the Disciplines</td>
</tr>
</tbody>
</table>
Degree Requirements (47 Semester credit hours):

A. 23 semester credit hours of required IDS courses:

1. 20 semester credit hours of required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBL 3403</td>
<td>Cultural and Linguistic Diversity in a Pluralistic Society</td>
</tr>
<tr>
<td>IDS 2213</td>
<td>World Civilizations since the Fifteenth Century</td>
</tr>
<tr>
<td>IDS 2713</td>
<td>Modes of Inquiry across the Fields of Study</td>
</tr>
<tr>
<td>IDS 3203</td>
<td>Physical Science</td>
</tr>
<tr>
<td>IDS 3201</td>
<td>Physical Science Laboratory</td>
</tr>
<tr>
<td>IDS 3213</td>
<td>Earth &amp; Life Science</td>
</tr>
<tr>
<td>IDS 3211</td>
<td>Earth &amp; Life Science Laboratory</td>
</tr>
<tr>
<td>IDS 3303</td>
<td>Studies in Exceptionality</td>
</tr>
</tbody>
</table>

2. 3 semester credit hours selected from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTH 2133</td>
<td>Health &amp; Environmental Safety</td>
</tr>
<tr>
<td>IDS 2083</td>
<td>Technology for Liberal Arts and Social Sciences</td>
</tr>
<tr>
<td>IDS 2103</td>
<td>The Individual, Family and Community</td>
</tr>
<tr>
<td>IDS 2203</td>
<td>World Civilizations to the Fifteenth Century</td>
</tr>
<tr>
<td>IDS 2303</td>
<td>World Literature I</td>
</tr>
<tr>
<td>IDS 2313</td>
<td>World Literature II</td>
</tr>
<tr>
<td>IDS 3653</td>
<td>Music and Related Arts</td>
</tr>
</tbody>
</table>

Domain I: Mathematics and Science

<table>
<thead>
<tr>
<th>Mathematics (3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 1023 College Algebra with Applications</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science (6 semester credit hours)</th>
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</thead>
<tbody>
<tr>
<td>Three hours from Level One and three hours from Level Two will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

Domain II: Society and Culture

<table>
<thead>
<tr>
<th>United States History and Diversity (6 semester credit hours)</th>
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</thead>
<tbody>
<tr>
<td>Any six hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Political Studies (6 semester credit hours)</th>
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<tbody>
<tr>
<td>POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Social and Behavioral Sciences (3 semester credit hours)</th>
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<tbody>
<tr>
<td>IDS 2113 Society and Social Issues (recommended)</td>
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<tr>
<th>Economics (3 semester credit hours)</th>
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<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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Domain III: Literature and the Arts

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<th>Literature (3 semester credit hours):</th>
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<tr>
<td>Any three hours listed below will satisfy this core requirement.</td>
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<table>
<thead>
<tr>
<th>IDS 2303 World Literature I: Through the Sixteenth Century</th>
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<tbody>
<tr>
<td>IDS 2313 World Literature II: Since the Sixteenth Century</td>
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<tr>
<th>The Arts (3 semester credit hours)</th>
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<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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Domain IV: Interdisciplinary Studies

<table>
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<tr>
<th>(3 semester credit hours)</th>
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<td>Any three hours listed below will satisfy this core requirement.</td>
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</table>

<table>
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<tr>
<th>IDS 2203 World Civilization to the Fifteenth Century</th>
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</thead>
<tbody>
<tr>
<td>IDS 2213 World Civilization since the Fifteenth Century</td>
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</tbody>
</table>

UTSA 2002–2004 Undergraduate Catalog
B. 24 semester credit hours of required support courses:

1. 21 semester credit hours of required courses:

   - **COM 2123** Oral Interpretation
   - **ECE 2103** Child Growth and Development
   - **EDU 2103** Education in American Society
   - **ESL 3023** Second Language Teaching & Learning EC–4
   - **MAT 1153** Essential Elements in Mathematics I
   - **MAT 1163** Essential Elements in Mathematics II
   - **RDG 3513** Children’s Literature

2. 3 semester credit hours selected from the following:

   - **ASL 1013** American Sign Language Basic I
   - **ASL 1023** American Sign Language Basic II
   - **BBL 3033** Mexican Americans in the Southwest
   - **BBL 3023** Mexican American Culture
   - **ECE 2113** Introduction to Early Childhood Education
   - **SPN 2003** Spanish for Elementary Education (Recommended)

Certification Requirements (39 semester credit hours):

TASP requirements must be satisfied before enrollment in Certification, Professional Education, and Student Teaching coursework.

A. 15 semester credit hours required of Early Childhood-Grade 4 Generalist courses:

   - **ECE 3313** Play, Creativity, & Learning EC–4
   - **ECE 3603** Language & Cognitive Development in EC–4
   - **RDG 3813** Early Literacy Learning EC–4
   - **RDG 3823** Reading Comprehension EC–4
   - **RDG 3803** Writing Development & Processes

B. 24 semester credit hours of Professional Education:

1. 18 semester credit hours required:

   - **ECE 4143** Principles & Practices of Inclusive Education EC–4
   - **ECE 4203** Assessment and Evaluation in EC–4
   - **EDP 3133** Principles of Learning & Classroom Management EC–4
   - **RDG 4733** Literacy Problems EC–4

   Admission to the Teacher Certification Program is prerequisite to enrollment in the Approaches classes.

   - **C&I 4303** Literacy/Social Studies/Fine Arts Approaches EC–4
   - **C&I 4403** Math/Science Approaches EC–4

2. 6 semester credit hours required:

   - **C&I 4616** Student Teaching – EC–Grade 4
Bachelor of Arts Degree in Interdisciplinary Studies (Grades 4–8 generalist certification option)

The minimum number of semester credit hours required for the IDS degree with grades 4–8 generalist certification is 131, at least 39 of which must be at the upper-division level.

Core Curriculum requirements: Students seeking the Bachelor of Arts degree in Interdisciplinary Studies with teacher certification must fulfill University Core Curriculum requirements. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
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</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | Mathematics (3 semester credit hours)  
MAT 1023 College Algebra with Applications  
Science (6 semester credit hours)  
Three hours from Level One and three hours from Level Two will satisfy this core requirement. |
| **Domain II: Society and Culture** | United States History and Diversity (6 semester credit hours)  
Any six hours listed under this section in the list of core courses will satisfy this core requirement.  
Political Studies (6 semester credit hours)  
POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.  
Social and Behavioral Sciences (3 semester credit hours)  
IDS 2113 Society and Social Issues (recommended)  
Economics (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
| **Domain III: Literature and the Arts** | Literature (3 semester credit hours): Any three hours listed below will satisfy this core requirement.  
IDS 2303 World Literature I: Through the Sixteenth Century  
IDS 2313 World Literature II: Since the Sixteenth Century  
The Arts (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
| **Domain IV: Interdisciplinary Studies** | (3 semester credit hours)  
Any three hours listed below will satisfy this core requirement.  
IDS 2203 World Civilization to the Fifteenth Century  
IDS 2213 World Civilization since the Fifteenth Century |
Degree Requirements (66 Semester credit hours):

A. 29 semester credit hours of required courses:

- BBL 3403 Cultural and Linguistic Diversity in a Pluralistic Society
- IDS 2083 Technology for Liberal Arts and Social Sciences
- HTH 2133 Health and Environmental Safety
- IDS 2713 Modes of Inquiry Across Fields of Study
- IDS 3203 Physical Science
- IDS 3201 Physical Science Laboratory
- IDS 3213 Earth and Life Science
- IDS 3211 Earth and Life Science Laboratory
- IDS 3303 Studies in Exceptionality
- IDS 2103 Individual, Family and Community
- IDS 2213 World Civilizations since the Fifteenth Century

B. 37 semester credit hours of required support courses:

- COM 2123 Oral Interpretation
- ESL 3063 Second Language Acquisition in Early Adolescence
- GRG 1023 World Regional Geography
- MAT 1093 Pre-Calculus
- MAT 1153 Essential Elements of Mathematics I
- MAT 1163 Essential Elements of Mathematics II
- MAT 1203 Calculus Concepts and Applications
- RDG 3523 Developmental Reading 4–8
- RDG 3533 Content Area Reading 4–8
- RDG 3633 Literature and Other Texts Across the Content Areas
- RDG 3803 Writing Development and Processes

Additional 3 semester credit hours in Level I or II Science course in a different discipline from science courses taken for core requirement. One science course must include a wet laboratory that can be met in core requirement: 1 semester credit hour.

Certification requirements (23 semester credit hours):

TASP requirements must be satisfied before enrollment in Certification, Professional Education, and Student Teaching coursework.

- C&I 4503 Approaches to Teaching Language Arts, Reading & Social Studies (4-8)
- C&I 4603 Approaches to Teaching Mathematics and Science (4-8)
- C&I 4502 Mathematics and Science Integrated Laboratory
- C&I 4626 Student Teaching 4–8 Generalists
- EDP 2113 Development in the Elementary and Middle School Child
- EDP 3303 Principles of Learning and Classroom Management
- EDU 2103 Education in American Society
SECONDARY CERTIFICATION

Students seeking certification to teach at the secondary level (grades 8 to 12) must obtain a bachelor’s degree in the academic area in which they plan to teach. They should plan to consult with their advisor in the Department in which their degree is contained. They should also consult with an advisor in the COEHD Advising and Certification Center for information regarding secondary certification requirements and admission to the teacher certification program. Requirements for degrees and certificates have been carefully coordinated; however, there are specific degree requirements that may not be required in the certification program, and specific certification requirements that may not be required in the degree program. Certificate program requirements are approved by the state of Texas.

Core Curriculum requirements: Students should refer to the appropriate section of this catalog for a listing of Core Curriculum requirements for the degree they are seeking.

Certification Requirements (9 semester credit hours):

- Computer Science (3 semester credit hours):
  - CS 1033 Microcomputer Applications

- Literature (3 semester credit hours) at the sophomore level or above

- Speech (3 semester credit hours):
  - COM 1043 Introduction to Communication
  - OR
  - COM 2123 Oral Interpretation

Professional Education and Reading Coursework (15 semester credit hours):

The TASP requirement must be satisfied before enrolling in Professional Education and Student Teaching coursework.

- C&I 4203 Models of Teaching in the Content Areas of the Secondary School
- EDP 3203 Learning and Development in the Secondary School Adolescent
- EDP 4203 Assessment and Evaluation for Secondary Teachers
- EDU 2103 Education in American Society
- RDG 3773 Introduction to Content Area Reading-Secondary

C&I 4203, EDP 4203, and RDG 3773 are restricted classes. Advisor authorization for these classes will be issued only if all prerequisites have been completed. C&I 4203 and RDG 3773 are offered only in the Fall or Spring semesters.

Student Teaching Component (6 semester credit hours)

- C&I 4646 Student Teaching: Secondary
  - OR
- C&I 4656 Student Teaching: Secondary-ESL

Secondary Teaching Fields

Option A. Students seeking certification for grades 8–12 in any of the teaching fields listed below should see an academic advisor in their college to determine specific courses needed to meet degree requirements. Most students will obtain a bachelor’s degree in the area of their teaching field. Certification and degree advisors should be consulted so that students will be able to meet degree and certification requirements with a minimum number of hours. All electives listed as part of the teaching field must be approved by a certification advisor. See an advisor in the COEHD, Advising and Certification Center for a current list of approved secondary level teaching fields.
Option B. Students seeking certification for grades 8–12 in two teaching fields will obtain a bachelor’s degree in one of the fields listed in Option A and can minor in one of these same fields (if minor is offered by the department). Certification and degree advisors should be consulted so that students will be able to meet degree and certification requirements with a minimum number of hours.

Generic Special Education. Because there is not a bachelor’s degree in special education, students choosing this teaching field must also choose another field that will double as their academic major. Coursework for this teaching field has been sequenced, and courses must be taken concurrently during the indicated semesters. The sequence begins in the Fall Semester.

24 semester credit hours:
   - Fall   SPE 3603, 3643, and 3653
   - Spring SPE 3623, 3633, and 3663
   - Summer SPE 4603 and 4653

Option C. This option is available to students pursuing certification for grades 8–12 in composite science (biology, chemistry, geology, and physics). Students should pursue a Bachelor of Science degree in Multidisciplinary Science (see page 398) and should select one of the four science areas and the corresponding certification program as their primary science.

COURSE DESCRIPTIONS
AMERICAN SIGN LANGUAGE
(ASL)

1013 American Sign Language: Basic I
(3-0) 3 hours credit.
A study of American Sign Language, including basic concepts and sign lexicon. Grammatical features, including structure of American Sign Language, will be stressed. Each student will be expected to demonstrate to the instructor basic expressive and receptive ASL skills. [TCCN: SGNL 1301.]

1023 American Sign Language: Basic II
(3-0) 3 hours credit. Prerequisite: ASL 1013 or consent of instructor.
Continued study of American Sign Language including sign language colloquialisms used in conversational signing. Expands students’ receptive and expressive ASL skills and provides a summary of information currently available dealing with ASL grammatical structure and its sociolinguistic and pragmatic usage. [TCCN: SGNL 1302.]

2013 American Sign Language: Intermediate I
(3-0) 3 hours credit. Prerequisites: ASL 1013 and ASL 1023, or consent of instructor.
This course is designed to help students improve their expressive, receptive, and general conversational ASL proficiency, particularly in, morphology, semantics, syntax, and lexicon. Students will demonstrate their use of ASL for interactive purposes. [TCCN: SGNL 2301.]

2023 American Sign Language: Intermediate II
(3-0) 3 hours credit. Prerequisites: ASL 1013, ASL 1023, and ASL 2013, or consent of instructor.
This course is designed to further extend students’ use of ASL skills for communicating with persons who are deaf or hard of hearing. Expands accuracy in using expressive and receptive skills. Students will encode and decode ASL forms related to a variety of topics and situations. [TCCN: SGNL 2302.]
COURSE DESCRIPTIONS
CURRICULUM AND INSTRUCTION (C&I)

4203 Models of Teaching in the Content Areas of the Secondary School
(3-0) 3 hours credit. Prerequisites: Completion of all requirements for admission to teacher certification program, including but not limited to satisfying the TASP requirement and completing EDP 3203 and EDU 2103. Prior or concurrent enrollment in EDP 4203 is required. Study of curricular, instructional, and management approaches to subject areas taught in the secondary schools. Emphasis on developing instructional and curricular strategies that are effective in teaching content areas. Course will address special population of students, application of instructional media, technology, and classroom management for the content areas. Twenty hours of observation in the school setting are required. This course may be offered in multiple sections according to subject-matter emphasis and may be offered in six-hour field-based block with RDG 3773. Not offered in the summer. Restricted course; advisor code required for registration.

4213 Approaches to Teaching Music
(3-0) 3 hours credit. Prerequisites: Completion of all requirements for admission to teacher certification program, including but not limited to satisfying the TASP requirement and completing EDU 2103 and EDP 2113. Designed to provide pre-service music teachers with the necessary knowledge and skills to prepare for successfully planning, implementing, and evaluating music instruction. Twenty-five hours of directed field experience is required.

4303 Literacy/Social Studies/Fine Arts Approaches EC-4
(2-2) 3 hours credit. Prerequisites: RDG 3823 and IDS 2213. Completion of all requirements for admission to teacher certification program. A study of methods and materials for teaching language arts, social studies and fine arts at the EC–4 level. Special emphasis is placed on an integrated approach to instruction. Students will develop a social-studies-based thematic unit with a focus on the inclusion of language arts and fine arts. Three to five hours of weekly field-based experience in a preschool/elementary school classroom during the semester are required. Restricted course; advisor code required for registration.

4403 Mathematics/Science Approaches EC–4
(3-0) 3 hours credit. Prerequisites: MAT 1153, MAT 1163, IDS 3201, IDS 3203, IDS 3213, IDS 3211. Completion of curriculum requirements and acceptance into the teacher certification program. A study of pedagogical approaches and materials designed to support young children’s meaningful exploration, discovery and construction of basic concepts and skills in mathematics and science in preschool through grade 4. Emphasis will be on the interrelatedness of math and science in the curriculum; how to provide an effective learning environment; how to plan and implement inquiry-based mathematics and science lessons; assessment of student learning; and the use of an integrated curriculum approach to teaching. Three to five hours of weekly field-based experience in a preschool/elementary school classroom during the semester are required. Restricted course; advisor code required for registration.

4502 Mathematics and Science Integrated Laboratory
(0-4) 2 hours credit. Prerequisite: Prior or concurrent enrollment in C&I 4603 is required. A laboratory course designed to present and model current content and strategies used in middle school mathematics and science classrooms. Manipulatives, technology and laboratory activities.

4503 Approaches to Teaching Language Arts, Reading and Social Studies (4–8)
(3-0) 3 hours credit. Prerequisites: RDG 3523, RDG 3533, IDS 2213, GRG 1023. Completion of all requirements for admission to teacher certification program, including but not limited to satisfying the TASP requirement and completing EDP 2113, EDU 2103, and IDS 2713. This course emphasizes student-centered curricula that meet the needs of diverse students in grades 4 through 8. Pre-service teachers examine and apply models of teaching and learning to develop the knowledge, values, and experiential bases necessary for effective teaching. Topics will include interdisciplinary learning experiences,
development of cognitive skills, evaluation of teaching and learning, classroom management, and use of technology. Twenty-five hours of directed field-based experiences in upper elementary/middle school classrooms are required. Restricted course; advisor code required for registration.

4603 Approaches to Teaching Mathematics and Science (4–8)
(3-0) 3 hours credit. Prerequisite: MAT 1153, MAT 1163, MAT 1203, IDS 3203, IDS 3201, IDS 3213, IDS 3211. Completion of all requirements for admission to teacher certification program, including but not limited to satisfying the TASP requirement and completing EDU 2103 and EDP 2113. Prior or concurrent enrollment in EDP 3303 and C&I 4502 is required. Study of curricular, instructional and management approaches to mathematics and science grades 4-8. Emphasis on developing instructional and curricular strategies that are effective in mathematics and science. Twenty hours of directed field-based experiences in upper elementary/middle school classrooms are required. Restricted course; advisor code required for registration.

4616 Student Teaching: EC–Grade 4
6 hours credit. Prerequisites: completion all requirements for admission to the teacher certification program; completion of all requirements for admission to the EC–4 student teaching semester, including but not limited to a 2.5 cumulative grade point average and satisfying the TASP requirement, and completion of 18 semester credit hours of Professional Education: C&I 4303, C&I 4403, ECE 4143, ECE 4203, EDP 3133, RDG 4733. Individuals must apply to the director of student teaching one semester in advance. Twelve consecutive weeks of full-day student teaching in a regular early childhood-grade 4 classroom under the supervision of university faculty. Student teacher will be responsible for planning, implementing and evaluating instruction in collaboration with the cooperating teacher and in conjunction with the UTSA supervisor. Weekly seminars explore issues in teaching practice.

4626 Student Teaching: 4–8 Generalists
6 hours credit. Prerequisites: Completion of all requirements for admission to the teacher certification program; completion of all requirements to the 4-8 student teaching semester, including but not limited to a 2.5 cumulative grade point average and satisfying the TASP requirement, and completion of 26 semester credit hours: C&I 4502, C&I 4503, C&I 4603, EDP 3303, ESL 3063, MAT 1203, RDG 3533, RDG 3633, RDG 3803. Individuals must apply to the director of student teaching one semester in advance. Twelve consecutive weeks of full-day student teaching in a regular upper elementary/middle school classroom under the supervision of university faculty. Student teacher will be responsible for planning, implementing and evaluating instruction in collaboration with the cooperating teacher and in conjunction with the UTSA supervisor. Weekly seminars explore issues in teaching practice. Must be repeated for credit.

4633 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. Student teacher will be responsible for planning, implementing and evaluating instruction in collaboration with the cooperating teacher and in conjunction with the UTSA supervisor. Individuals pursuing an English as a second language endorsement (ESL) will be placed in an approved ESL program. NOTE: C&I 4633 may not be taken concurrently with C&I 4616, 4626, 4646, 4656, 4666, 4676, 4683, 4693, 4926, 4933, or 4943. (Formerly EDU 4003. Credit cannot be earned for both C&I 4633 and EDU 4003.)

4646 Student Teaching: Secondary
6 hours credit. Prerequisites: Completion of all requirements for admission to the teacher certification program and the student teaching semester, including but not limited to a 2.5 cumulative grade point average; satisfying the TASP requirement and completing EDP 3203, EDP 4203, RDG 3773, and C&I 4203. Can lack no more than 6 hours in content subject matter. Individuals must apply to the director of student teaching one semester in advance. Twelve consecutive weeks of full-day student teaching in grades 8–12. Student teacher will be responsible for planning, implementing and evaluating instruction in collaboration with the cooperating teacher and in conjunction with
the UTSA supervisor. Individuals pursuing a Basic Secondary Certificate, Option A, will student teach in the single
teaching field for which certification is sought. Individuals pursuing a Basic Secondary Certificate, Options B or C,
will student teach in two of the teaching fields for which certification is sought. (Formerly EDU 4116. Credit cannot
be earned for both C&I 4646 and EDU 4116.)

4656  Student Teaching: Secondary-ESL
6 hours credit. Prerequisites: Completion of all requirements for admission to the teacher certification program;
completion of all requirements for admission to the student teaching semester, including but not limited to a 2.5
cumulative grade point average; satisfying the TASP requirement; completion of a minimum of 6 semester credit
hours of the ESL endorsement; and completion of EDU 2103, EDP 3203, EDP 4203, and C&I 4203. Individuals must
apply to the director of student teaching one semester in advance.
Twelve consecutive weeks of full-day student teaching in grades 8-12, including six weeks of full days in one
teaching field and six weeks of full days in an approved English as a second language (ESL) program. Student
teacher will be responsible for planning, implementing and evaluating instruction in collaboration with the
cooperating teacher and in conjunction with the UTSA supervisor. Individuals pursuing a specialization in generic
special education will student teach for six weeks of full days in one teaching field with students having special needs
and six weeks of full days in an approved English as a second language program. (Credit cannot be earned for both
C&I 4656 and EDU 4126.)

4666  Student Teaching: All Level Physical Education
6 hours credit. Prerequisites: Completion of all requirements for admission to the teacher certification program;
completion of all requirements for admission to the student teaching semester, including but not limited to a 2.5
cumulative grade point average; satisfying the TASP requirement; and completion of EDP 3203, KIN 4203, KIN
4303, and RDG 3733.
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 or middle school setting and six weeks of full
days in a high school setting (grades 8–12) in the certificate area sought. Student teacher will be responsible for
planning, implementing, and evaluating instruction in collaboration with the cooperating teacher and in conjunction
with the UTSA supervisor. Meets student teaching requirements for the all-level certificate.
NOTE: Individuals may not concurrently pursue an all-level certificate and an endorsement in English as a second
language (ESL). (Credit cannot be earned for both C&I 4666 and EDU 4136.)

4676  Student Teaching: Dual Placement: EC–4 Generalist Certificate with Generic Special Education Endorsement
or 4-8 Generalist Certificate with Generic Special Education Endorsement
6 hours credit. Prerequisites: For students pursuing the EC-4 Generalist Certificate, completion of all requirements
for admission to the teacher certification program; completion of all requirements for admission to the student
teaching semester, including but not limited to a 2.5 cumulative grade point average; satisfying the TASP
requirement; and completion of EDU 2103, EDP 3133, C&I 4303, and C&I 4403. For students pursuing the 4-8
Generalist Certificate, completion of all requirements for admission to the teacher certification program; completion
of all requirements for admission to the student teaching semester, including but not limited to a 2.5 cumulative grade
point average; satisfying the TASP requirement; and completion of EDU 2103, EDP 2113, EDP 3303, C&I 4502,
C&I 4503, and C&I 4603. Students seeking to obtain SPE must have completed SPE endorsement coursework prior
to student teaching. Individuals must apply to the director of student teaching one semester in advance.
For EC-4 certification with generic special education endorsements, six consecutive weeks of full-day student
teaching in a regular EC-4 classroom and six consecutive weeks in a special education classroom under the
supervision of University faculty. For 4-8 certification with generic special education endorsements, six consecutive
weeks of full-day student teaching in a regular 4-8 classroom and six consecutive weeks in a special education
classroom under the supervision of University faculty. Student teacher will be responsible for planning, implementing
and evaluating instruction in collaboration with the cooperating teacher and in conjunction with the UTSA
supervisor. Weekly seminars explore issues in teaching practice. (Credit cannot be earned for both C&I 4676 and
EDU 4206.)
**Student Teaching: All-Level Music-Elementary**

3 hours credit. Prerequisites: Concurrent enrollment in C&I 4693; completion of all requirements for admission to the teacher certification program; completion of all requirements for admission to the student teaching semester, including but not limited to a 2.5 cumulative grade point average; satisfying the TASP requirement; and completion of EDP 2113, C&I 4213, C&I 4203, and RDG 3773. Individuals must apply to the director of student teaching one semester in advance.

Six consecutive weeks of full-day student teaching in an elementary/middle school under the supervision of university faculty. Student teacher will be responsible for planning, implementing and evaluating instruction in collaboration with the cooperating teacher and in conjunction with the UTSA supervisor. Meets student teaching requirements for the elementary component of the all-level certificate. (Credit cannot be earned for both C&I 4683 and EDU 4403.)

**Student Teaching: All-Level Music-Secondary**

3 hours credit. Prerequisites: Concurrent enrollment in C&I 4683; completion of all requirements for admission to the teacher certification program; completion of all requirements for admission to the student teaching semester, including but not limited to a 2.5 cumulative grade point average; satisfying the TASP requirement; and completion of EDP 2113, C&I 4213, C&I 4203, and RDG 3773. Individuals must apply to the director of student teaching one semester in advance.

Six consecutive weeks of full-day student teaching in a secondary school (grades 8-12) under the supervision of University faculty. Student teacher will be responsible for planning, implementing and evaluating instruction in collaboration with the cooperating teacher and in conjunction with the UTSA supervisor. Meets student teaching requirements for the secondary component of the all-level certificate. (Credit cannot be earned for both C&I 4693 and EDU 4413.)

**Independent Study**

1 to 3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the Department Chair 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

**Special Studies in Curriculum and Instruction**

(1-0, 2-0, 3-0) 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 may be repeated for credit when topics vary, but not more than 6 semester credit hours, regardless of the discipline, will apply to a bachelor’s degree.

**Internship in Education**

6 hours credit. Prerequisites: A bachelor’s degree; completion of all requirements for admission to the teacher certification program; completion of all coursework requirements for the certification program; consent of the COEHD Advising and Certification Center; and consent of the director of student teaching.

Internships to be jointly supervised by an employing school district and UTSA. Experiences will relate to the intern as the teacher-of-record in the classroom. Must be repeated for credit.

**Honors Thesis**

3 hours credit. Prerequisites: Enrollment limited to candidates for honors in the Department of Interdisciplinary Studies and Curriculum and Instruction during the last two semesters; consent of the Honors College.

Supervised research and preparation for an honors thesis. May be repeated once with advisor’s approval.
COURSE DESCRIPTIONS
EARLY CHILDHOOD
(ECE)

2103 Child Growth and Development
(3-0) 3 hours credit.
Study of growth and development during early childhood. Review and integration of physical, psychological, social, language, and cognitive development affecting growth in children. Emphasis on multicultural perspectives of child development addressing culturally diverse populations and children with atypical patterns of development. Field-based experiences required. (Formerly ECE 3123. Credit cannot be earned for both ECE 2103 and ECE 3123.) [TCCN: TECA 1354.]

2113 Introduction to Early Childhood Education
(3-0) 3 hours credit.
Introductory course for prospective teachers of young children. Competencies specific to the science of teaching in early childhood/elementary programs will be introduced. Students will become familiar with the fundamentals of teaching including models of technology, lesson and unit planning, classroom management skills, integration of technology, creating a classroom environment conducive to learning, and teacher professionalism. Field-based experiences required. [TCCN: TECA 1311.]

3133 Programs in Early Childhood
(3-0) 3 hours credit.
Survey of historical, philosophical, psychological, and sociocultural foundations of early childhood programs. Examination of past and current trends in early childhood programs. Emphasis on inclusive education approaches to program development, curriculum design, and instructional methods. Review of culturally responsive programs; technological tools for instruction, and effective accommodations for groups of young children representing a wide range of ability. Field-based experiences required.

3313 Play, Creativity, & Learning EC–4
(3-0) 3 hours of credit.
A study of the current knowledge of play and creativity and the relationship between children’s play and cognitive, social, and affective development. Will provide early childhood and primary educators with knowledge and skills necessary to promote and guide children’s play behaviors as the child’s primary learning mechanism. Emphasis on effective strategies, equipment, materials and activities that support and encourage children’s play and creativity at the early childhood and primary levels. Field-based experiences are required.

3603 Language & Cognitive Development in EC–4
(3-0) 3 hours credit.
Introduction to theories of language and cognitive development in young children with implications for acquisition of language and early literacy skills. Review of the development of symbolic logic and language learning of children from diverse cultural and linguistic backgrounds. Field experiences required.

4103 Guidance of Young Children in Groups
(3-0) 3 hours credit.
Study of effective strategies for guiding the social-emotional development and learning of children, including those with special needs, in group settings. Emphasis on classroom management and discipline methods; understanding human interactions and the cultural dynamics of groups; and guiding children in task involvement. Examination of strategies for facilitating cooperative activities and use of materials; the design of effective learning environments; conflict resolution techniques, and strategies for enhancing the inclusion of children with special needs in social and learning contexts. Field-based experiences required.
4123 Family and Community Resources in Early Childhood
(3-0) 3 hours credit.
Study of approaches to family, community, societal, cultural, and ideological support systems in children’s growth, learning, and development. Emphasis on how these factors are related in the permissive-restrictive dimensions of child rearing and socialization in broad perspectives across environmental contexts. Examination of resources and systems to address the special needs of families with children who are “at risk” or have disabilities. Review of technological tools used to locate and compile information on community resources. Field-based experiences required.

4143 Principles and Practices of Inclusive Education EC–4
(3-0) 3 hours credit.
Study of culturally responsive programming for diverse groups of children representing a wide range of ability. Identification of theoretical perspectives and principles for inclusive education in early childhood and elementary. Emphasis on effective instructional planning, learning environments, and teaching practices to accommodate individuals in group settings. Field-based experiences are required.

4203 Assessment and Evaluation in EC–4
(3-0) 3 hours credit.
Principles of designing and using assessment and evaluation techniques that are culturally fair, intellectually sound, reliable, dependable, and content-valid for young children. Emphasis on differentiation among criterion-referenced, norm-referenced, individual, informal, authentic, and group assessments. Review of strategies for using assessment data to inform instructional planning, and matching assessment techniques to individual children and learning situations. Field-based experiences are required.

4913 Independent Study
3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the Department chair 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4953 Special Studies in Early Childhood and Elementary Education
(3-0) 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 may be repeated for credit when topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4993 Honors Thesis
3 hours credit. Prerequisites: Enrollment limited to candidates for honors in the Department of Interdisciplinary Studies and Curriculum and Instruction during the last two semesters; consent of the Honors College. Supervised research and preparation for an honors thesis. May be repeated once with advisor’s approval.

COURSE DESCRIPTIONS
INTERDISCIPLINARY STUDIES (IDS)

1001 Freshman Topics in Interdisciplinary Studies
(1-1) 1 hour credit.
Required for entering freshmen in the College of Education and Human Development with less than 15 hours of coursework and who are interested in majoring in Interdisciplinary Studies. Critical study of topics in interdisciplinary studies. Innovative classroom and learning techniques are used to introduce students to these topics and to help strengthen critical thinking, problem solving, and writing skills. A maximum of three semester credit hours of freshman topics courses may apply to a bachelor’s degree, although this specific topic may be taken only once.
2083 Technology for Liberal Arts and Social Sciences
(3-1) 3 hours credit.
This course focuses on learning from, learning about, and learning with technology in the liberal arts and social sciences. Students will examine the functions and processes of basic technology applications as they investigate and create products relevant to their field of study. Course content will include but is not limited to the use of specific software and hardware, principles of organization and design, processes of development, and evaluation of technological tools. One-hour laboratory included.

2103 The Individual, Family, and Community
(3-0) 3 hours credit.
Study of theories of the individual, the family, and the community. The course integrates approaches from a variety of social sciences. [TCCN: TECA 1303.]

2113 Society and Social Issues
(3-0) 3 hours credit.
Study of social and institutional phenomena, including ethnicity, gender, and social conflict. These phenomena will be approached through case studies.

2203 World Civilization to the Fifteenth Century
(3-0) 3 hours credit.
A general introduction to World History from the Late Neolithic to the Columbian Encounter in the late fifteenth century CE. Broad overview of the pattern of development of major civilizations and their interactions, with closer attention given to those events, institutions, beliefs, and practices that involved and affected large numbers of people and had lasting significance for later generations. [TCCN: HIST 2321.]

2213 World Civilization since the Fifteenth Century
(3-0) 3 hours credit.
A general introduction to World History since the late fifteenth century CE. Broad overview of the pattern of development of major civilizations and their interactions, with closer attention to those events, institutions, beliefs, and practices that involved and affected large numbers of people and laid foundations of the modern world. [TCCN: HIST 2322.]

2303 World Literature I: Through the Sixteenth Century
(3-0) 3 hours credit. Prerequisite: ENG 1023 or an equivalent.
This course is an exploration of sources and continuing traditions in World Literatures in their various cultural and aesthetic contexts from their Origins through the Sixteenth Century. It includes extensive reading of representative examples of the major oral and written literatures including, but not limited to, poetry, narratives and drama and examines how these literatures influenced contemporary experience. The readings will be studied from multiple perspectives and will be related to comparable aesthetic expressions in music and the fine arts. A major Inquiry Project with a report is required. [TCCN: ENGL 2332.]

2313 World Literature II: Since the Sixteenth Century
(3-0) 3 hours credit. Prerequisite: ENG 1023 or an equivalent.
This course is an exploration of sources and continuing traditions in World Literatures in their various cultural and aesthetic contexts from the beginning of the Sixteenth Century to the Present. It includes extensive reading of representative examples of the major oral and written literatures including, but not limited to, poetry, narratives and drama and examines how these literatures influenced contemporary experience. The readings will be studied from multiple perspectives and will be related to comparable aesthetic expressions in music and the fine arts. A major Inquiry Project with a report is required. [TCCN: ENGL 2333.]
2713  **Modes of Inquiry across the Fields of Study**  
(3-0) 3 hours credit. Prerequisites: ENG 1013 and ENG 1023.  
Study of thinking in the sciences, social studies, mathematics, language arts, and fine arts through interdisciplinary investigations. Course experiences include modeling, practice, and analysis of ways of inquiring in the several subject areas, and seeking their implications for interdisciplinary inquiries. (Formerly IDS 2003. Credit cannot be earned for both IDS 2713 and IDS 2003.)

3003  **Science and Humanity**  
(3-0) 3 hours credit. Prerequisite: Successful completion of MAT 1023 strongly recommended.  
Study of paradigms of the physical and life sciences under a mathematical framework noting their effects on humanity. The course uses an integrative, standards-based approach to studying the nature of scientific inquiry, knowledge, and theory development, relationships between science and technology, and effects of science and scientific thinking on humanity’s past, present, and future.

3201  **Physical Science Laboratory**  
(0-3) 1 hour credit. Recommended: concurrent enrollment in IDS 3203.  
Introduction to the tools, techniques, and topics of modern physical and chemical science investigations with academic applications.

3203  **Physical Science**  
(3-0) 3 hours credit. Prerequisite: completion of core curriculum requirements.  
Study of major concepts, principles, and theories in the fields of physics and chemistry, and ways of scientific thinking that contribute to empirical and theoretical inquiries. Study of the fundamental laws that govern the universe, including the worlds of mechanics, thermodynamics, electromagnetism, and quantum theory, and how they relate to physics and chemistry. Topics will include but not be limited to: basic scientific problem-solving techniques, fundamental forces; energy and how it is conserved and transformed; optics; matter; atomic structure; and chemical interactions. Course may be team taught.

3211  **Earth and Life Science Laboratory**  
(0-3) 1 hour credit. Recommended: concurrent enrollment in IDS 3213.  
Introduction to the tools, techniques, and topics of modern earth and life science investigations with academic applications.

3213  **Earth and Life Science**  
(3-0) 3 hours credit. Prerequisites: IDS 3203 and IDS 3201  
Study of major concepts, principles, and theories in the fields of the earth and life sciences and ways of scientific thinking that contribute to empirical and theoretical inquiries. Study of the origin of the planet and solar system with special emphasis on geologic time and plate tectonics and their influence on patterns and products of biological evolution. Topics may include but not be restricted to: atmospheric and oceanic circulation; climate changes; natural resources; biological evolution and distribution; biodiversity including specialization and adaptation; interaction and interdependence; genetic continuity and reproduction; growth, development, and differentiation; energy, matter, and organization; maintenance of a dynamic equilibrium. Field experiences may be required. Course may be team taught.

3303  **Studies in Exceptionality**  
(3-0) 3 hours credit.  
Study of the nature, needs, characteristics, causes, and incidence of exceptional children, including historical and legal foundations for identifying and serving exceptional children under state and federal regulations. Community options for exceptional children at various levels of ability will also be addressed. (Credit may not be earned for both IDS 3303 and EDP 3603.)

3653  **Music and Related Arts**  
(3-1) 3 hours credit.  
Study of the essential concepts of music and visual arts. An understanding of the cognitive content of each art will be reinforced by a variety of activities which relate directly to each artistic discipline. Similarities and differences in the various arts will be investigated in terms of basic elements, means of creating, and experience.
4913 **Independent Study**
3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the Department Chair 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4953 **Special Studies in Interdisciplinary Studies**
(3-0) 3 hours credit.
An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies may be repeated for credit when topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4993 **Honors Thesis**
3 hours credit. Prerequisites: Enrollment limited to candidates for honors in the Department of Interdisciplinary Studies and Curriculum and Instruction during the last two semesters; consent of the Honors College. Supervised research and preparation for an honors thesis. May be repeated once with advisor’s approval.

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**COURSE DESCRIPTIONS**

**READING**

**RDG**

0013 **Reading Improvement**
(3-0) 3 hours credit.
Practical instruction in strategies for improving reading of university-level materials. Strategies developed include determining word meanings; understanding main ideas and supporting details; identifying the writer’s purpose, point of view, and intended meaning; analyzing relationships among ideas; using critical reasoning when reading; and study skills. Course does not count toward any degree at UTSA.

3513 **Children’s Literature**
(3-0) 3 hours credit.
Designed to familiarize students with children’s books from diverse cultures that are appropriate for young children. Topics will include: the values of children’s books, criteria for selecting materials, the evaluation of individual books, a survey of the genres of children’s literature, literary response, and the discussion of current issues in the field of children’s literature.

3523 **Developmental Reading – Grades 4–8**
(3-0) 3 hours credit.
An overview of the development of reading across the grades with an emphasis on grades 4 through 8. This course focuses on the reading process, techniques for developing oral and written language facility, word identification and comprehension of readers from various sociocultural backgrounds and with differing abilities, and classroom assessment of reading. Twenty hours of field experiences are required.

3533 **Content Area Reading – Grades 4–8**
(3-0) 3 hours credit. Prerequisite: RDG 3523
Study of the teaching and learning of content area reading in grades 4–8 including the textual, contextual, and cultural factors that influence reading. The course considers the range of reading abilities of intermediate and middle grade students, texts used in these grade levels, and strategies for teaching and evaluating vocabulary, comprehension, and thinking skills in the content areas. Twenty hours of field experiences are required.
3633  Literature and Other Texts Across the Content Areas – Grades 4–8  
(3-0) 3 hours credit.  
This course is designed to familiarize students with literature and other texts appropriate for students in grades 4 through 8. These texts include trade books, informational books, electronic texts, and other real world texts that are appropriate for teaching and learning. Topics will include: examination of critical issues in children’s books and young adult literature, evaluation and selection of texts, and literary response. Ten hours of field experience are required.

3773  Introduction to Content Area Reading–Secondary  
(3-0) 3 hours credit. Prerequisites: Completion of all requirements for admission to the teacher certification program, including but not limited to satisfying the TASP, requirement and completing EDU 2103 and EDP 3203. Study of the reading process and of materials and techniques for supporting reading and writing in the secondary school. Considers the range of reading ability of secondary students, texts used, and strategies for teaching vocabulary, and comprehension in different content areas. Directed field experiences in secondary school classrooms are required. Opportunities for cross-disciplinary applications. Not offered in the summer. Twenty hours of field experience are required. Restricted course; advisor code required for registration.

3803  Writing Development and Processes  
(3-0) 3 hours credit.  
Examines the nature of written language and facets of the writing process. The course focuses on stages in the writing process, writing in different genres, the developmental nature of writing, writing in relation to other communication processes, and the place of technology in writing.

3813  Early Literacy Learning—EC–4  
(3-0) 3 hours credit. Prerequisite: ECE 3603.  
Introduction to early literacy learning and ways in which it relates to language development in diverse communities. Special emphasis is placed on emergent reading and writing, development of phonemic awareness, decoding and word analysis, fluency, and meaning construction. Additional topics include family literacy and the assessment of early literacy development. Field experiences in this course include an early literacy assessment of a young child and one-on-one tutoring in oral language, reading, and writing. Twenty hours of field experience required.

3823  Reading Comprehension—EC–4  
(3-0) 3 hours credit. Prerequisite: RDG 3813.  
Study of the reading comprehension process, including how textual, reader, contextual, and cultural factors affect understanding of written text. Emphasis is placed on comprehending narrative and expository text and supporting literacy in the content areas. Twenty hours of directed field experience are required.

4733  Literacy Problems—EC–4  
(3-0) 3 hours credit. Prerequisites: RDG 3813 and RDG 3823 (or RDG 3823 can also be taken concurrently).  
Practicum that affords students the opportunity to assess and tutor struggling readers. Cognitive, socio-cultural, and affective factors related to the child’s literacy development are addressed. Students learn a variety of means to assess literacy ability and develop instructional interventions to address identified areas of need. A maximum of 25 hours of fieldwork are required.

4913  Independent Study  
3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the Department Chair 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4953  Special Studies in Reading  
(3-0) 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 may be repeated for credit when topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.
4993  Honors Thesis
3 hours credit. Prerequisites: Enrollment limited to candidates for honors in the Department of Interdisciplinary Studies and Curriculum and Instruction during the last two semesters; consent of the Honors College. Supervised research and preparation for an honors thesis. May be repeated once with advisor’s approval.

COURSE DESCRIPTIONS
SPECIAL EDUCATION
(SPE)

3603  Introduction to Exceptionality
(3-0) 3 hours credit. Prerequisite: Must be taken concurrently with SPE 3643 and SPE 3653 during the Fall Semester. A study of individuals, groups, and populations designated or characterized as disabled, handicapped, deviant, or exceptional by various agencies and organizations historically and currently in society. Etiology, characteristics, services, and efficacy of treatment and intervention will be studied. Offered in the Fall Semester. (Formerly EDP 3603. Credit cannot be earned for both SPE 3603 and EDP 3603.)

3613  Issues in Deaf Culture and Education: Practicum
(3-0) 3 hours credit. Prerequisites: ASL 1013, ASL 1023, ASL 2013, and ASL 2023, or consent of instructor. Requires the demonstration and use of ASL skills for communicating with people who are deaf or hard of hearing in a variety of community and academic settings, including but not limited to elementary through postsecondary general and special education classrooms, public and private service agencies, community service organizations, shopping centers, work stations, and restaurants. (Formerly EDP 3613. Credit cannot be earned for both SPE 3613 and EDP 3613.)

3623  Assessment of Exceptional Children
(3-0) 3 hours credit. Prerequisites: SPE 3603 or consent of instructor; must be taken concurrently with SPE 3623 and SPE 3663 during the Spring Semester. An introduction to assessment of individuals with disabilities. Informal and formal assessment instruments, procedures, and systems for assessment of aptitude, achievement, adaptive behavior, and language abilities will be studied. Offered in the Spring Semester. (Formerly EDP 3623. Credit cannot be earned for both SPE 3623 and EDP 3623.)

3633  Behavior Management of Exceptional Children
(3-0) 3 hours credit. Prerequisites: SPE 3603 or consent of instructor; must be taken concurrently with SPE 3623 and SPE 3663 during the Spring Semester. A study of learning theory with emphasis on operant and respondent conditioning. Research related to alternative explanations for behavior and behavior change will be included. Planning, application, and evaluation of a behavior change project is required. Offered in the Spring Semester. (Formerly EDP 3633. Credit cannot be earned for both SPE 3623 and EDP 3633.)

3643  Language and Cognitive Development and Dysfunction
(3-0) 3 hours credit. Prerequisite: Must be taken concurrently with SPE 3603 and SPE 3653 during the Fall Semester. A study of theories, research, and research-based practices related to the language and cognitive development needs of learners with disabilities. Offered in the Fall Semester. (Formerly EDP 3643. Credit cannot be earned for both SPE 3643 and EDP 3643.)

3653  Practicum in Special Education (Introduction)
3 hours credit. Prerequisites: Must be taken concurrently with SPE 3603 and SPE 3643 during the Fall Semester. Treatment, educational and habilitative theories, research, and practices will be studied. Observation and evaluation of services provided to individuals with disabilities will be required. Students enrolled in this course will be required to spend 10 hours a week (mornings) in field-based placements. Offered in the Fall Semester. (Formerly EDP 3653. Credit cannot be earned for both SPE 3653 and EDP 3653.)
3663  Practicum in Special Education (Intermediate)
3 hours credit. Prerequisites: SPE 3603, SPE 3643, and SPE 3653; must be taken concurrently with SPE 3623 and SPE 3633 during the Spring Semester.
The study of curriculum content, practices of habilitation, education, instruction, and treatment provided to individuals with disabilities. Theories, research, and contemporary practices will be emphasized in conjunction with evaluation of efficacy. Students enrolled in this course will be required to spend 10 hours a week (mornings) in field-based placements. Offered in the Spring Semester. (Formerly EDP 3663. Credit cannot be earned for both SPE 3663 and EDP 3663.)

4603  Working with Parents of Exceptional Children
(3-0) 3 hours credit. Prerequisites: 9 semester credit hours of special education coursework or consent of instructor; must be taken concurrently with SPE 4653 during the Summer Session.
A study of theories, research, and practices of parent and family involvement in the habilitation, education and treatment of individuals with disabilities. History, research, and contemporary issues in advocacy, legislation, training, and consultation will be studied. Offered in the Summer Session. (Formerly EDP 4603. Credit cannot be earned for both SPE 4603 and EDP 4603.)

4653  Practicum in Special Education (Advanced)
3 hours credit. Prerequisites: SPE 3603, SPE 3623, SPE 3633, SPE 3643, SPE 3653, and SPE 3663; must be taken concurrently with SPE 4653 during the Summer Session.
The study of the planning, application, and evaluation of Individual Educational Plans (IEPs) in the specialized educational and related services provided under the law to individuals with disabilities. Students will be required to demonstrate competency in providing services and will be required to spend mornings (7:30-11:30) in field placements. Offered in the Summer Session. (Formerly EDP 4653. Credit cannot be earned for both SPE 4653 and EDP 4653.)

4913  Independent Study
3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the Department chair 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4993  Honors Thesis
3 hours credit. Prerequisites: Enrollment limited to candidates for honors in the Department of Interdisciplinary Studies and Curriculum and Instruction during the last two semesters; consent of the Honors College.
Supervised research and preparation for an honors thesis. May be repeated once with advisor’s approval.
TEACHER CERTIFICATION PROGRAMS AND REQUIREMENTS

Students seeking teacher certification should be aware that certification requirements in the state of Texas are established and enforced by the State Board for Educator Certification (SBEC). Because of this, certification policies and requirements have the potential to change during the course of students’ academic careers. Students are encouraged to stay in close contact with the College of Education and Human Development (COEHD) Advising and Certification Center throughout their academic careers so that they will be informed of changes as they occur.

General Information

The University of Texas at San Antonio (UTSA) offers programs for preparation as elementary, middle school, high school, and all-level teachers. UTSA also has professional certification programs at the graduate level for students seeking professional licensure.

- Students who are seeking a Bachelor’s degree together with certification (undergraduate students) should refer to the “Teacher Certification Programs for Undergraduate Students” section of this catalog.
- Students who have an earned Bachelor’s degree from an accredited institution of higher education but are not certified to teach in any state (post-baccalaureate students) should contact the COEHD Advising and Certification Center to obtain the schedule for Post-baccalaureate informational seminars.
- Students who have an earned Bachelor’s degree and are not certified to teach in any state who wish to pursue teacher certification at the graduate level concurrently with a Master’s degree should contact the Master of Arts in Education with a concentration in Curriculum and Instruction and Teaching (MAECIT) program coordinator. The MAECIT program is for Elementary certification (EC–4) with concentrations in Early Childhood, Special Education, or Bilingual Education.
- Students who have an earned Bachelor’s degree and are not certified to teach in any state who wish to pursue alternative certification should contact the Region 20 Education Service Center for information about the Teacher Orientation and Preparation Program (TOPP). Some TOPP courses are taught on the UTSA campus; however, the program is administered through the Region 20 Education Service Center.
- Students who have an earned Bachelor’s degree and are certified to teach in a state other than Texas or in a foreign country should contact the State Board for Educator Certification (SBEC) at 1-888-863-5880 for information about out-of-state or out-of-country licensure.
- Students seeking certification as a School Counselor, Master Reading Teacher, Reading Specialist, Principal, or Superintendent should consult the current UTSA Graduate Catalog and a graduate faculty advisor for information about Master’s degree and professional certification programs.

Teacher Certification Programs

The following describes undergraduate programs for students who are pursuing a Bachelor’s degree concurrently with teacher certification:

- Undergraduate students interested in teaching Pre-kinder, Kindergarten, and first through fourth grades will declare a major in Interdisciplinary Studies (IDS) with teacher certification in EC–4 Generalist. These students should refer to the “Teacher Certification in Grades EC–4” section of this catalog for the Bachelor of Arts in Interdisciplinary Studies (Early Childhood–Grade 4 generalist option). Degree and certification advising for this program is conducted by COEHD Advising and Certification Center advisors.
- Undergraduate students interested in teaching in fourth through eighth grades will declare a major in Interdisciplinary Studies (IDS) with teacher certification in Grades 4–8 Generalist. These students should refer to the “Teacher Certification in Grades 4–8” section of this catalog for the Bachelor of Arts in Interdisciplinary Studies (grades 4–8 generalist option). Degree and certification advising for this program is conducted by COEHD Advising and Certification Center advisors.
- Undergraduate students interested in teaching Bilingual Pre-kinder, Kindergarten, and first through fourth grades will declare a major in Interdisciplinary Studies (IDS) with teacher certification in EC–4 Bilingual Generalist. These students should refer to the “Teacher Certification in Bilingual Education” section of this catalog for the Bachelor of Arts in Interdisciplinary Studies (Early Childhood–Grade 4 Bilingual Generalist option). Degree and certification advising for this program is conducted by COEHD Advising and Certification Center advisors.
Undergraduate students interested in teaching **Bilingual fourth through eighth grades** will declare a major in Interdisciplinary Studies (IDS) with teacher certification in Bilingual 4–8 Generalist. These students should refer to the “Teacher Certification in Bilingual Education” section of this catalog for the Bachelor of Arts in Interdisciplinary Studies (Grades 4–8 Bilingual Generalist certification option). Degree and certification advising for this program is conducted by COEHD Advising and Certification Center advisors.

Undergraduate students interested in teaching **Special Education** will declare a major in Interdisciplinary Studies (IDS) and will choose either the EC–4 or the 4–8 Generalist options described previously. These students will consult with COEHD Advising and Certification Center advisors for information about the Special Education coursework and sequencing.

Undergraduate students interested in teaching **eighth through twelfth grades** will declare a major in the academic area in which they plan to teach. These students will refer to the “Secondary Certification” section of this catalog for information about specialized core curriculum and professional education coursework for which they will enroll concurrently with degree requirements. Students seeking secondary certification are advised to stay in close contact with COEHD Advising and Certification Center advisors as old programs are phased out and new programs are phased in by SBEC over a five-year period.

Students interested in teaching **Physical Education in grades Pre-kinder through twelfth grades** will declare a major in Kinesiology with an emphasis in Teacher Preparation. These students should refer to the “Bachelor of Science Degree in Kinesiology – Teacher Preparation Emphasis” section of this catalog for degree and certification requirements. Degree and certification advising for this program is conducted by COEHD Advising and Certification Center advisors.

Students interested in teaching **Music in grades Pre-kinder through twelfth grades** will declare a major in Music with an emphasis in Music Studies and will choose either the Instrumental or Choral Music tracks. These students will refer to the “Bachelor of Music with a Music Studies Emphasis” section in this catalog for information about degree and certification requirements. Degree advising for this program is conducted by faculty and academic advisors in the Department of Music while certification advising is conducted by COEHD Advising and Certification Center advisors.

**Standards**

Certificate programs have been designed to meet the standards for teacher certification set by the State Board of Education. UTSA is approved to recommend individuals for these certificates if the individual has completed all requirements for the certificate sought.

The State of Texas utilizes the “approved program” concept in its system of teacher certification. The State:

1. establishes the regulations and standards by which teachers are certified (the requirements are independent of college or university degree requirements);
2. approves colleges and universities to recommend students for teacher certificates in areas where programs have been found to be in conformity with State standards and are on file with the State; and
3. issues the teacher certificate directly to the student, upon recommendation of an approved college or university.

**Applying for the Teacher Certificate**

Upon successful completion of the bachelor’s degree, the certification program, required examinations, and student teaching (or an approved substitution for student teaching), students must apply for their certificate on line at the SBEC Web site: www.sbec.state.tx.us.

Additional eligibility requirements for recommendation for the teacher certificate include a 2.50 cumulative grade point average on a 4.00 scale, good standing status at UTSA (not on academic probation), and the recommendation of the College of Education and Human Development (COEHD).

Upon completion of processing by the Advising and Certification Center and by SBEC, the teacher certificate will be sent directly to the student.
Criminal History Check

During each semester in which field-based courses are enrolled, students will be required to submit evidence of a clear criminal history check from the Texas Department of Public Safety. For further information about criminal history check procedures, consult the COEHD Associate Dean of Undergraduate Studies.

Teaching Certificates for Persons with Criminal Background

State guidelines read as follows: In accordance with Article 6252-13c, Texas Civil Statutes, the State Board for Educator Certification (SBEC) may suspend or revoke a teacher certificate or refuse to issue a teacher certificate for a person who has been convicted of a felony or misdemeanor for a crime that is directly related to the duties and responsibilities of the teaching profession.

Certification in States Other than Texas

Once certified in Texas, teachers who move out of state may consult the NASDTEC Interstate Contract website at http://www.nasdtec.org/cat_report.tpl to determine if Texas has reciprocity with the state of relocation. If the state in question requires an out-of-state document to be completed, it should be forwarded to the UTSA Certification Officer in the COEHD Advising and Certification Center.

Students moving out of state before having completed all requirements for teacher certification in Texas will be required to complete a state-approved teacher preparation program once relocated.

Policies

Advisor Authorization

Advisor authorization is necessary in order to register for restricted classes. Because restricted classes vary by type of certification, individuals are responsible for determining if the Professional Education course or courses needed are restricted courses. If restricted, advisor authorization will be necessary and must be requested in advance of the date of registration. The COEHD Advising and Certification Center accepts applications for advisor authorization from approximately two weeks before registration begins until the registration process has been completed. Contact the COEHD Advising and Certification Center for the specific date on which the applications for advisor authorization will be taken. After processing of the applications, advisor authorization will be available for pickup or will be delivered by mail.

Appeals

- Appeal of Certification Requirements
  Students wishing to appeal admission requirements to the UTSA teacher certification program, prerequisite requirements, and/or coursework requirements should obtain instructions in the COEHD Advising and Certification Center on filing an appeal with the COEHD Advisory Committee. The Advisory Committee is composed of COEHD faculty representatives and meets once per semester.

- Appeal of Non-Recommendation
  If a student does not meet certification requirements, the UTSA Certification Officer so notifies the student that he/she will not be recommended for certification, and includes information regarding the appeal process available to the student. A student appeal is submitted to the COEHD Advising and Certification Center. The UTSA Certification Officer reviews the student’s file and recommends action to the COEHD Associate Dean for Undergraduate Studies, who makes a decision on the appeal and so notifies the student. The student may then appeal this decision directly to the University Standing Committee on Teacher Education. If the student appeals, the Committee makes its recommendation to the Dean of the College of Education and Human Development for submission to the Provost and Vice President of Academic Affairs. The Provost and Vice President for Academic Affairs notifies the student of the decision through the Dean of the College of Education and Human Development.
Course Substitutions

UTSA certification programs have been carefully designed to meet State Board for Educator Certification (SBEC) standards and to prepare UTSA students to pass the Texas Examinations of Educator Standards (TEExES). It is, therefore, in the student’s best interest to follow the approved certification program. **Course substitutions are granted only in extenuating circumstances and only if appropriate substitutions are available. All requests for substitutions must be filed in writing with the COEHD Advising and Certification Center before the individual registers for the course.** Requested course submissions must match the required course in content, intent, and level.

Restricted Education Courses

Restricted Education courses have strict prerequisites as specified by COEHD faculty. In order to register for a restricted course, a student must apply for an advisor code. Advisor authorization for restricted Professional Development and Reading classes may be applied for in the COEHD Advising and Certification Center. Restricted Professional Development and Reading courses are as follows:

- For those seeking EC–4 certification, restricted courses are C&I 4303 and C&I 4403.
- For those seeking 4–8 certification, restricted courses are C&I 4502, C&I 4503, and C&I 4603.
- For those seeking Bilingual EC–4 certification, restricted courses are BBL 4033, BBL 4063, BBL 4073 and C&I 4403.
- For those seeking Bilingual 4–8 certification, restricted courses are BBL 4033, BBL 4063, BBL 4073, C&I 4502, and C&I 4603.
- For those seeking 8–12 certification, restricted courses are C&I 4203, EDP 4203, and RDG 3773.
- For those seeking All-level certification in Physical Education, restricted courses are KIN 4203 and KIN 4303.
- For those seeking All-level certification in Music, restricted courses are C&I 4203 and C&I 4213.

See the “Advisor Code” section for more information about obtaining an advisor code for the classes listed above.

Waivers

Individuals who wish to request a waiver of course requirements should first contact the COEHD Advising and Certification Center to determine if the requirement is a UTSA or a State Board for Educator Certification requirement. Individuals who wish to request a waiver of a UTSA requirement must file a written request with the COEHD Advising and Certification Center. Waivers cannot be granted for the requirements mandated by the State Board of Educator Certification.

Testing Requirements

Texas Academic Skills Program (TASP)

The TASP test is a competency examination that measures basic skills in reading, mathematics, and writing. Passing scores on each of the three sections of the TASP are required for admission to the UTSA teacher certification program. Consult the **UTSA Information Bulletin** for additional admission requirements to the UTSA teacher certification program. Passing TASP scores are also required prior to enrollment in restricted Education courses, including student teaching.

Student Teaching

Student teaching is an extremely important component of the certification program. The primary purpose of student teaching is to apply what has been learned in university courses to the professional setting (i.e., an actual classroom). **IT IS EXPECTED THAT THE STUDENT TEACHING COMPONENT OF THE CERTIFICATION PROGRAM WILL BE COMPLETED THROUGH UTSA.**

Admission to Student Teaching

Admission to the professional semester of student teaching must be requested by formal application during the semester before the student plans to student teach. A meeting will be held early in the semester to disseminate application information. The deadline for the application for students who plan to student teach in the Fall semester is February 15th. For students planning
to student teach in the Spring semester, the deadline for the application is October 1\textsuperscript{st}. Acceptance into the student teaching program is contingent upon completion of the following requirements:

1. Admission to the UTSA Teacher Certification Program, including satisfaction of the Texas Academic Skills Program (TASP) requirement.
2. A 2.5 cumulative grade point average on all college work attempted.
3. At least 90 semester credit hours completed before seeking admission (students should consult the Director of Student Teaching for specific credit requirements).
4. Completion of the Professional Education coursework:
   - **EC–4**: 18 semester credit hours of Professional Education: C&I 4303, C&I 4403, ECE 4143, ECE 4203, EDP 3133, RDG 4733.
   - **4–8**: 26 semester credit hours: C&I 4502, C&I 4503, C&I 4603, EDP 3303, ESL 3063, Math 1203, RDG 3533, RDG 3633, RDG 3803.
   - **Secondary**: Lacking no more than 6 hours in content area and: C&I 4203, EDP 3203, EDP 4203, RDG 3773.
   - **All-level Physical Education**: EDP 3203, KIN 4203, KIN 4303, RDG 3773.
   - **All-level Music**: C&I 4203, C&I 4213, EDP 2113, RDG 3773.
5. Students seeking supplementary certification in English as a Second Language should consult an advisor regarding additional course requirements.
6. Presentation of a negative tuberculosis report, as specified by the school district, from a licensed physician, valid at the time of registration for student teaching.
7. Approval of the Director of Student Teaching.
8. Evidence of a clear criminal history check obtained from the Texas Department of Public Safety.

NOTE: The Professional Semester is a full-time commitment. The student teaching semester is 15 weeks long with time divided between school campuses and UTSA. A student teacher must follow the same schedule as his/her cooperating teacher in the public schools for 12 weeks of consecutive, full-day, full-time student teaching. Therefore, it is not possible to register for other courses that meet in the daytime hours. Since performance in the student teaching semester is a key factor used by school districts in evaluating an applicant’s potential as a teacher, it is recommended that the individual not attempt to work during the student teaching semester. There is no special provision for financial support of student teachers.

**Student Teaching Seminar**

At the beginning of the student teaching semester but before student teaching actually begins, individuals will be notified of a mandatory seminar conducted by the Advising and Certification Center. During this seminar, the Center staff will provide information about the TExES, procedures concerning placement files, and signing up for inclusion in the Student Teacher Directory. Guest speakers will be available to address such topics as the Texas Student Education Association (TSEA) and interviewing techniques. ALL prospective student teachers must attend this seminar during the student teaching semester.

**Texas Examinations of Educator Standards (TExES)**

The Texas Examinations of Educator Standards are state-mandated examinations whose purpose is to ensure that educators possess the necessary content and professional knowledge to teach in the Texas public schools. Individuals seeking certification in the state of Texas must pass the required tests before they can be recommended for a teacher certificate and/or endorsement.

TExES tests are criterion-referenced. This means that they are designed to measure an individual’s knowledge in relation to an established standard of competence rather than in relation to the performance of other individuals.

The UTSA TExES registration deadline will be three days prior to the date published in the TExES registration bulletin.

Further information on required TExES tests can be obtained in the COEHD Advising and Certification Center, the Office of the TExES Coordinator, or from the UTSA TExES website: http://coehd.utsa.edu/STEX/Index.html.
Photo - College of Engineering
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COLLEGE OF ENGINEERING

The College of Engineering offers Bachelor of Science degrees in Civil, Electrical, and Mechanical Engineering. Each program is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET). Individuals enrolling in these degree programs are given an opportunity to develop a strong background in the engineering sciences and to learn the analysis, design, and synthesis tools necessary to function well as active participants in many traditional, new, and emerging areas of technology.

The college has excellent laboratory facilities where students receive hands-on instruction by faculty. Computer-aided design (CAD) facilities, including state-of-the-art workstations, are routinely used in all programs. Some classes are taught by adjunct faculty from local industries, giving students the opportunity to interact with engineering professionals engaged in relevant engineering practice.

This engineering education incorporates demonstrable attributes of ABET-2000 criteria as core values. Graduates from the College of Engineering should have excellent opportunities for employment and pursuit of graduate degrees.

Cooperative Education in Engineering Program

The Cooperative Education in Engineering Program formally integrates University studies with institutionally supervised work experiences at cooperating organizations. Students participating in this program alternate periods of study at the University with periods of employment in industry. This combination of experiences enhances the student’s knowledge, personal development, and preparation for a professional career. Participants register at the University each semester. During the work periods, students register for the one-semester-credit-hour Engineering Co-op course. At the end of each work period, students submit reports covering the period. These reports are the basis of the student’s grades in the course. The cooperative education work periods also provide students with a source of income to help pay for their college expenses.

Students may petition to apply 3 semester credit hours of Engineering Co-op as a technical elective toward their degree in engineering. They are encouraged to petition prior to co-op activities.

To qualify for the Cooperative Education in Engineering Program, a student must: have declared a major in the College of Engineering; have completed at least 36 semester credit hours of major and support work, including 7 hours of college-level calculus and 10 hours of college-level physics; and have a minimum cumulative grade point average of 2.50 and a minimum grade point average of 2.50 in their College of Engineering courses. Students are advised that many co-op employers require cumulative grade point averages higher than 2.50, and some require a minimum cumulative grade point average of 3.0. Transfer students may participate in the program after completing at least one semester at the University.

For more information and to apply to the Cooperative Education in Engineering Program, students should contact Career Services.

DEGREE REQUIREMENTS
COMMON TO ALL ENGINEERING PROGRAMS

Entering students should enroll in EGR 1303, Exploring the Engineering Profession, as early as possible, preferably during their first semester at UTSA. The purpose of this course is to help students to choose the appropriate area of engineering and to be successful in their chosen area. During their first semester, students should specify their interest in a specific engineering program by selecting civil, electrical, or mechanical engineering as a major. Undecided engineering students should select a major closest to their area of interest (refer to the following program descriptions). Students may obtain additional information about each program from the college office or a faculty advisor in the appropriate discipline.
Prerequisites for Civil Engineering (CE), Electrical Engineering (EE), Mechanical Engineering (ME), and Engineering (EGR) courses must be completed with a grade of “C” or better. Students must satisfy the University’s Core Curriculum and ABET accreditation requirements. Recommended degree plans and current ABET requirements may be obtained from the College of Engineering.

Requirements common to all engineering degree programs follow.

I. Core Curriculum requirements:

Students seeking the Bachelor of Science degree in any engineering field must fulfill University Core Curriculum requirements in the same manner as other students at UTSA.

MAT 1214, CHE 1103, and PHY 1904 (also listed under section II, General Engineering requirements) may be used to satisfy the Core Curriculum requirements for Domain I: Mathematics and Science.

II. General Engineering requirements:

All degree-seeking candidates in engineering must complete the following 29 semester credit hours:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 1103</td>
<td>General Chemistry</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EGR 1303</td>
<td>Exploring the Engineering Profession</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EGR 2213</td>
<td>Statics and Dynamics</td>
<td>3</td>
<td>MAT 1223 and PHY 1904</td>
</tr>
<tr>
<td>EGR 2323</td>
<td>Applied Engineering Analysis I</td>
<td>3</td>
<td></td>
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<tr>
<td>MAT 1214</td>
<td>Calculus I</td>
<td>3</td>
<td></td>
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<tr>
<td>MAT 1223</td>
<td>Calculus II</td>
<td>3</td>
<td></td>
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<tr>
<td>PHY 1904, 1911</td>
<td>Technical Physics I and Laboratory</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHY 1924, 1931</td>
<td>Technical Physics II and Laboratory</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

COURSE DESCRIPTIONS
ENGINEERING
(EGR)

1303 Exploring the Engineering Profession
(3-1) 3 hours credit.
Engineering as a career; professional and ethical responsibility including case studies; effective team membership; application of modern tools for effective written and oral communication; approaches to engineering problem formulation and solution; and engineering design. One hour of problem solving recitation, experiments, and laboratory demonstrations.

2213 Statics and Dynamics
(3-1) 3 hours credit. Prerequisites: MAT 1223 and PHY 1904.
Force, moment, equilibrium, centroids and moments of inertia, kinematics, and kinetics of particles. One hour of problem solving recitation.

2323 Applied Engineering Analysis I
(3-1) 3 hours credit. Prerequisite: MAT 1223.

3301 Engineering Co-op
1 hour credit. Prerequisite: Acceptance into the Cooperative Education in Engineering Program.
Designed for students participating in Cooperative Education in Engineering Program. Problems related to students' work assignments during their work for co-op employers. May be repeated for credit, but no more than
3 semester credit hours of Engineering Co-op may apply to a bachelor’s degree. To apply 3 semester credit hours of Engineering Co-op as a technical elective towards a degree in engineering, students must petition and get approval of a faculty advisor prior to co-op activities. The grade report for the course is either CR (satisfactory performance) or NC (unsatisfactory performance).

**3323 Applied Engineering Analysis II**
(3-1) 3 hours credit. Prerequisite: EGR 2323.
Application of mathematical principles to the analysis of engineering problems using vector differential and integral calculus, multivariable calculus, partial differential equations, and Fourier series; and use of software tools. One hour of problem solving recitation.

**3713 Engineering Economic Analysis**
(3-0) 3 hours credit. Prerequisite: Junior or senior standing in the College of Engineering.
Fundamentals of economics and economic policies; techniques of investment analysis for engineering decisions; and discussion of professional practice-ethics, project management, proposal preparation, and communication. (Formerly EGR 4713. Credit cannot be earned for both EGR 3713 and EGR 4713.)

**4953 Special Studies in Engineering**
(3-0) 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 may be repeated for credit when topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

**4993 Honors Research**
3 hours credit. Prerequisites: 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.
DEPARTMENT OF CIVIL ENGINEERING

Bachelor of Science Degree in Civil Engineering

The Bachelor of Science degree in Civil Engineering is a broad-based program designed to prepare students for careers in areas traditionally associated with civil engineering and several modern areas of high technology.

Civil Engineering Educational Objectives

The American Society of Civil Engineers (ASCE) defines civil engineering as: “The profession in which a knowledge of the mathematical and physical sciences gained by study, experience, and practice is applied with judgment to develop ways to utilize, economically, the materials and forces of nature for the progressive well-being of humanity in creating, improving, and protecting the environment; in providing facilities for community living, industry, and transportation; and in providing structures for the use of humankind.”

The educational objectives of the Bachelor of Science degree in Civil Engineering are to prepare students to enter the profession of civil engineering, to prepare students for graduate study, and to prepare students to engage in life-long learning. The curriculum is designed to provide a foundation for work in most areas of the profession including environmental engineering, geotechnical engineering, hydraulics, hydrology, water resources, structural engineering, and transportation/traffic engineering.

Specifically the graduates will have the opportunity to develop:

1. an ability to apply their knowledge of mathematics and science
2. an ability to collect, analyze, and interpret data
3. an ability to design a system, component or process to meet desired needs
4. an ability to function on a team
5. an ability to identify, formulate, and solve civil engineering problems using techniques, skills, and modern tools necessary for civil engineering practice
6. an understanding of professional and ethical responsibilities, particularly the ASCE Code of Ethics
7. an ability to communicate effectively
8. breadth in their general education as well as depth in their technical education.

Senior civil engineering students are encouraged to take the Fundamentals of Engineering Examination. Graduates are encouraged to become registered professional engineers and to continue their education throughout their careers.

Civil engineering students must complete the University Core Curriculum requirements and the department’s general engineering requirements. These general engineering requirements are selected to provide the technical abilities and skills necessary to meet the educational objectives of the department. These courses include the introductory engineering course, EGR 1303 Exploring the Engineering Profession, and EGR 2213 Statics and Dynamics. They also include courses in the basic sciences (chemistry and physics) and mathematics that are required of all engineering students. Civil engineering students take several basic engineering science courses that provide the fundamentals necessary for future coursework. These include Mechanics of Solids, Engineering Geology, Fluid Mechanics, Properties and Behavior of Engineering Materials, and Civil Engineering Measurements. They also take courses covering applied probability and statistics, engineering communications, systems analysis, engineering economics, and computer-aided design. Eight required civil engineering courses provide students with the fundamentals in the areas of environmental engineering, geotechnical engineering, hydrology and water resources, structural engineering, and transportation/traffic engineering. Many of these junior/senior level courses contain elements of civil engineering design. Two elective courses in the senior year enable students to specialize in one or two areas of civil engineering.

Design is integrated throughout the curriculum starting with a freshman introductory course, EGR 1303 Exploring the Engineering Profession, and ending with the senior design sequence, CE 4803 Engineering Practice and CE 4813 Civil Engineering Design. Design components are contained in most required engineering topics courses. These include CE 3213 Reinforced Concrete Design, CE 3233 Steel Design, CE 3413 Geotechnical Engineering and Applications, CE 3633
Water and Wastewater Treatment, CE 3723 Applied Hydrology, CE 4123 Highway Engineering, and CE 4603 Water Resources Engineering. Design also is included in many of the elective courses, including CE 3253 Introduction to Masonry and Design, CE 4233 Transportation Systems, CE 4413 Foundation Analysis and Design, CE 4653 Design of Pollution Control Systems, and CE 4723 Hydraulic Systems Design. The design experience culminates in a major senior capstone design course, CE 4813 Civil Engineering Design. The capstone design project is multi-disciplinary in that it involves three or more civil engineering areas and draws upon most prior coursework. The course involves teamwork, both oral and written presentations, a final design report, and a formal presentation.

All candidates for this degree must fulfill the Core Curriculum requirements, the general engineering requirements, and the degree requirements, which are listed below.

**Core Curriculum requirements**: Students seeking the Bachelor of Science degree in Civil Engineering must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | **Mathematics** (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
**Science** (6 semester credit hours)  
Three hours from Level One and three hours from Level Two will satisfy this core requirement.  
Note: MAT 1214, CHE 1103, and PHY 1904 may be used to satisfy the Core Curriculum requirements for Domain I, as well as several of the General Engineering requirements. |
| **Domain II: Society and Culture** | **United States History and Diversity** (6 semester credit hours)  
Any six hours listed under this section in the list of core courses will satisfy this core requirement.  
**Political Studies** (6 semester credit hours)  
POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.  
**Social and Behavioral Sciences** (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
**Economics** (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
| **Domain III: Literature and the Arts** | **Literature** (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
**The Arts** (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
General Engineering Requirements

All degree-seeking candidates in engineering must complete the following 29 semester credit hours, as well as the Core Curriculum requirements and major requirements:

- **CHE 1103** General Chemistry
- **EGR 1303** Exploring the Engineering Profession
- **EGR 2213** Statics and Dynamics
- **EGR 2323** Applied Engineering Analysis I
- **MAT 1214** Calculus I
- **MAT 1223** Calculus II
- **PHY 1904, 1911** Technical Physics I and Laboratory
- **PHY 1924, 1931** Technical Physics II and Laboratory

Degree Requirements

All degree-seeking candidates in Civil Engineering must complete the following semester credit hours, as well as the Core Curriculum requirements and general engineering requirements:

### A. 63 semester credit hours of required courses:

- **CE 1403** Engineering Communication
- **CE 2103** Civil Engineering Measurements
- **CE 2633** Environmental Engineering
- **CE 3103** Mechanics of Solids
- **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 and Applications
- **CE 3603** Fluid Mechanics
- **CE 3633** Water and Wastewater Treatment
- **CE 3713** Civil Engineering Systems Analysis
- **CE 4123** Highway Engineering
- **CE 4313** Computer-Aided Design in Civil Engineering
- **CE 4543** Construction Planning and Management
- **CE 4603** Water Resources Engineering
- **CE 4803** Engineering Practice
- **CE 4813** Civil Engineering Design
- **EGR 3713** Engineering Economic Analysis
- **GEO 4023** Engineering Geology
- **STA 2303** Applied Probability and Statistics for Engineers

### B. 6 semester credit hours of civil engineering electives must be selected from the following list:

- **CE 3253** Introduction to Masonry and Timber Design
- **CE 3723** Applied Hydrology
- **CE 4233** Transportation Systems
- **CE 4413** Foundation Analysis and Design
- **CE 4653** Design of Pollution Control Systems
- **CE 4723** Hydraulic Systems Design
COURSE DESCRIPTIONS
CIVIL ENGINEERING

(CE)

1301 Introduction to Civil Engineering
(1-0) 1 hour credit.
Engineering as a career, engineering ethics, and approaches to engineering problem formulation and solution using principles of design and decision making. (Formerly EGR 1301. Credit cannot be earned for both CE 1301 and EGR 1301.)

1403 Engineering Communication
(2-3) 3 hours credit.
Technical communication: oral, written, and graphic; introduction to engineering analysis, design and synthesis; and computer-aided graphics. (Formerly EGR 1402. Credit cannot be earned for both CE 1403 and EGR 1402.)

2103 Civil Engineering Measurements
(2-3) 3 hours credit. Corequisite: MAT 1214.
Principles of measurement and error analysis; application of equipment to acquire, analyze, and control data in civil engineering systems; and introduction to plane surveying. (Formerly CE 2113. Credit cannot be earned for both CE 2103 and CE 2113.)

2633 Environmental Engineering
(3-0) 3 hours credit. Prerequisites: CHE 1103 and PHY 1904.
Principles, analysis, and design related to environmental monitoring, protection, and remediation systems. Topics include environmental quality and legislation, modeling, water treatment, wastewater treatment, solid and hazardous waste management, air and noise pollution, and radioactive waste management. (Formerly CE 2133. Credit cannot be earned for both CE 2633 and CE 2133.)

3103 Mechanics of Solids
(2-3) 3 hours credit. Prerequisites: EGR 2213 and EGR 2323.
Internal forces and deformations in solids; stress, strain, and their relations; stresses and deflections in beams column theory and analysis; and engineering applications. (Formerly EGR 3213. Credit cannot be earned for both CE 3103 and EGR 3213.)

3113 Structural Analysis
(3-0) 3 hours credit. Prerequisite: CE 3103.
Forces and deflections in structural systems; considers stationary and moving loads and exact and approximate methods.

3213 Reinforced Concrete Design
(2-3) 3 hours credit. Prerequisite: Completion of or concurrent enrollment in CE 3113. Corequisite CE 3243.
Ultimate strength theory and design for reinforced concrete members.

3233 Steel Design
(2-3) 3 hours credit. Prerequisite: Completion of or concurrent enrollment in CE 3113. Corequisite CE 3243.
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: CE 3103 and STA 2303. Corequisite: CE 2103.
Structure, properties, and behavior of engineering materials; measurement and analysis of material properties and behavior. Laboratory exercises illustrate typical material behavior and selected principles of mechanics.
3253 **Introduction to Masonry and Timber Design**  
(3-0) 3 hours credit. Prerequisite: Completion of or concurrent enrollment in CE 3113.  
Design philosophy and methodology for masonry and timber structures. Flexure design, axial load design, and shear design of basic masonry and timber components.

3413 **Geotechnical Engineering and Applications**  
(2-3) 3 hours credit. Prerequisite: CE 3103 Corequisite: GEO 4023.  
Exploration, sampling, and in-situ measurements; laboratory testing; review of fundamental properties of soil and rock; flow through porous media; the effective stress principle and computation of in-situ stress distributions; shear strength of soils and one-dimensional consolidation settlement; introduction to slope stability. (Formerly CE 4213. Credit cannot be earned for both CE 3413 and CE 4213.)

3603 **Fluid Mechanics**  
(2-3) 3 hours credit. Prerequisites: EGR 2213 and STA 2303.  
Fluid properties, fluid statics concepts, equations of fluid flow in pipes and open channels, and flow-through porous media.

3633 **Water and Wastewater Treatment**  
(2-3) 3 hours credit. Prerequisites: CE 2633 and completion of or concurrent enrollment in CE 3603.  
The application of chemical, biochemical, and physical processes to water treatment, wastewater treatment, and pollution control. (Formerly CE 4633. Credit cannot be earned for both CE 3633 and CE 4633.)

3713 **Civil Engineering Systems Analysis**  
(3-0) 3 hours credit. Prerequisite: EGR 3713.  
Systems approach to problem solving, application of operations research in civil engineering; and mathematical modeling and analysis techniques including marginal analysis, linear programming, and dynamic programming and decision analysis. (Formerly CE 4713. Credit cannot be earned for both CE 3713 and CE 4713.)

3723 **Applied Hydrology**  
(3-0) 3 hours credit. Prerequisite: CE 3603.  
Hydrologic cycle, precipitation, hydrologic abstractions, surface runoff; unit hydrographs; synthetic hydrographs; peak discharge relationships; flood frequency analysis; flood and reservoir routing; and groundwater hydrology.

4123 **Highway Engineering**  
(3-0) 3 hours credit. Prerequisite: Junior standing in civil engineering.  
General characteristics of highway design; horizontal and vertical alignment, cross-sections, earthwork, drainage, and pavement; and economic analysis.

4233 **Transportation Systems**  
(3-0) 3 hours credit. Prerequisite: Junior standing in civil engineering.  
Planning, design, construction, operation, and maintenance of transportation systems; and concepts of various modes of transportation. (Formerly CE 4113. Credit cannot be earned for both CE 4233 and CE 4113.)

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; and application of computer-aided design in civil engineering.

4413 **Foundation Analysis and Design**  
(3-0) 3 hours credit. Prerequisite: CE 3413.  
Design of footings, mats and slab-on-grade; earth pressures and design of retaining walls, piles and drilled piers; soil improvement and ground modification.
4543  Construction Planning and Management  
(3-0) 3 hours credit. Prerequisite: Completion of or concurrent 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  
(3-0) 3 hours credit. Prerequisites: CE 2633 and CE 3603. 
Analysis and design of surface and subsurface water resource systems; dam and reservoir design for recharge, flood control, and water supply; and design of water supply, wastewater collection, and stormwater systems.

4653  Design of Pollution Control Systems  
(2-3) 3 hours credit. Prerequisite: CE 3633. 
Analysis, synthesis, design, and system optimization of integrated processes and operations to handle and treat water, wastewater, and hazardous wastes.

4723  Hydraulic Systems Design  
(3-0) 3 hours credit. Prerequisites: CE 3723, CE 4603, and Senior standing in civil engineering. 
Analysis and design of surface and subsurface water resource systems; dam and reservoir design for recharge, flood control, and water supply, and demand forecasting, optimization of multi-objective systems, and allocations planning and management.

4803  Engineering Practice  
(3-0) 3 hours credit. Prerequisite: CE 4803 must be taken one semester prior to CE 4813. 
Civil Engineering design process, project proposal, project specifications, and project management. Develop design team, define a multi-disciplinary project, and present the project proposal for approval. Teams and projects will be continued in CE 4813.

4813  Civil Engineering Design  
(2-3) 3 hours credit. Prerequisites: CE 3213, CE 3413, CE 3633, CE 3713, and CE 4803. Corequisites: CE 3233 and CE 4603. 
Opportunity to apply design skills to execution of an open-ended integrated civil engineering design project, including field and laboratory investigations, numerical and scale modeling, design, and formal oral and written presentation of results. Considers safety, reliability, environmental, economic, and other constraints, and ethical and social impacts.

4911-3  Independent Study  
1 to 3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the Department Chair and Dean of the college. 
Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4953  Special Studies in Civil Engineering  
(3-0) 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 may be repeated for credit when topics vary but, not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.
DEPARTMENT OF ELECTRICAL ENGINEERING

The Department of Electrical Engineering (EE), the largest department in the College of Engineering, offers a Bachelor of Science degree with concentrations in Control System Engineering, Communication and Digital Signal Processing (DSP) System Engineering, and Computer Engineering. The program is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET). Individuals enrolling in this degree program are given an opportunity to develop a strong background in the engineering sciences and to learn the analysis, design, and synthesis tools necessary to function well as active participants in many traditional, new, and emerging areas of technology. The Cooperative Education in Engineering Program formally integrates students’ University studies with institutionally supervised work experiences at cooperating organizations. The majority of students have had engineering-related experience during their Bachelor’s degree. The EE department continues to be recognized locally and nationally for the quality of its undergraduate program. As a result, EE graduates continue to find high-paying jobs or are accepted into graduate schools nationwide.

Bachelor of Science Degree in Electrical Engineering

The Bachelor of Science degree in Electrical Engineering offers students the opportunity to prepare for careers in areas associated with electronics, digital systems, computer architecture and design, communications, controls and robotics, computer-aided design (CAD), instrumentation, bioengineering, and other traditional and emerging areas of high technology. Through the proper selection of elective courses to augment required courses, successful students may develop a specialization pertinent to many of these areas that may lead to employment with electronic companies, high-technology industries, and government agencies.

The electrical engineering curriculum allows the student to study a single topic in depth by choosing electives from one of the three technical areas: computer engineering, communication and DSP system engineering, and control system engineering. At least three technical elective courses must be selected from a single technical area.

The educational objectives of the Electrical Engineering program are that:

1. Graduates will have strong abilities in the fundamentals in mathematics, engineering, and science.
2. Graduates will possess sound capabilities in critical thinking and problem solving essential for a successful engineering career.
3. Graduates will gain knowledge in current electrical engineering methodologies and tools and be able to apply them to remain competitive.
4. Graduates will be able to make a contribution to the greater society in both the short and long term.

Meeting Program Objectives

To meet the program objectives, the curriculum is organized into a flexible 129 semester-credit-hour structure that provides high-quality education in the fundamentals of engineering, in addition to a thorough coverage of the major specialties within electrical engineering. A selection of technical electives is provided to allow concentration in depth in selected areas: computer engineering, communication and DSP system engineering, and control system engineering.

Highly qualified faculty work in concert to provide and to evolve a curriculum that is challenging to students, with depth in engineering science, design orientation, and modern laboratory experience. The curriculum objectives are accomplished via a three-tiered curriculum structure comprised of the lower-division core (the first two years), the upper-division core (concentrated primarily in the third year), and the senior-level electives, which are briefly described below.

Lower-Division Core

The lower-division core provides students with a basic background in mathematics, physics, and chemistry; computer hardware and software fundamentals; electric circuit fundamentals and electrical engineering laboratory experience; statics and dynamics; and communication skills, humanities, and social sciences. The lower-division core relates to objectives 1 and 2. EGR 2213 Statics and Dynamics is outside the discipline, but electrical engineering students take the course with students from other engineering disciplines.
Upper-Division Core

The upper-division core for electrical engineering provides students with a basic education in the fundamentals of electrical engineering. These courses include fundamental circuits (3 semester credit hours), controls (3 semester credit hours), energy conversion (3 semester credit hours), electromagnetics (3 semester credit hours), electronics (6 semester credit hours), logic design (3 semester credit hours), and probability and random processes (3 semester credit hours). Many of these fundamental courses include the usage of modern software tools for design and analysis. These fundamentals are supplemented with one hands-on laboratory course (3 semester credit hours). Written and technical communication is further emphasized in the laboratory course. The upper-division core relates to objectives 1, 2, and 3.

Senior-Level Electives

In the senior year, electrical engineering students enroll in five technical electives (15 semester credit hours), a senior laboratory course (3 semester credit hours), and the capstone design sequence (4 semester credit hours). The technical elective courses involve modern software tools. The capstone sequence not only provides a major design experience but also emphasizes teamwork, proposal development, communication skills, and professional and ethical responsibility. Students are required to choose one of the three technical areas and to select a minimum of three technical electives (9 semester credit hours) from that single area. The remaining two technical electives (6 semester credit hours) may be selected either from the same area or from other two areas, including one course at the graduate-level and/or three credit hours from an engineering co-op program. The engineering co-operative program provides an opportunity to the students for obtaining practical experience by enrolling in three semesters (one semester credit hour each semester) and working in an approved industry. Students who want to pursue graduate studies are encouraged to enroll in a graduate class during their last semester, which will be counted as one of the remaining technical electives. These senior-level electives relate to objectives 2, 3, and 4.

The electrical engineering program uses five sources for assessment of its program:

1. Faculty assessment;
2. Student assessment prior to graduation;
3. Oral exit interview of graduating seniors by the Department Chair;
4. Written exit interview of graduating seniors by the Department Chair;
5. Assessment by companies/graduate schools that hire/accept EE graduates.

Engineering Design Experience

The engineering design experience is especially important in meeting objectives 4 and 5 and is integrated throughout the program. Modern software tools usage, design and analysis, and formal written report writing are integrated components of several of the electrical engineering courses. EE 3113 Electrical Engineering Laboratory I and EE 4113 Electrical Engineering Laboratory II emphasize hands-on experiments using basic to advanced capability instruments and formal written, as well as oral, reports. Other electrical engineering classes that use software tools include EE 3313 Electronic Circuits I, EE 3413 Analysis and Design of Control Systems, EE 3423 Signals and Systems I, EE 3463 Microcomputer Systems I, EE 3563 Digital Systems Design, and EE 4313 Electronic Circuits II. Engineering design is distributed throughout the curriculum starting from the second semester in EE 2513 Logic Design. In the third semester, students take EE 3563 Digital Systems Design, which deals with design and simulation of sequential digital systems. During the fourth semester, students take EE 3313 Electronic Circuits I and EE 3113 Electronics Laboratory I, which provide students with significant design components. During the fifth semester, analog control systems design is covered in EE 3413 Analysis and Design of Control Systems. In the sixth semester, students take EE 4313 Electronic Circuits II, which deals with design and analysis of advanced analog circuits. In the seventh and eighth semesters, students take five technical elective courses, which all have design components. During the seventh semester, students also take EE 4113 Electrical Engineering Laboratory II, which includes design-oriented automated testing as important attributes.

All candidates for this degree must fulfill the Core Curriculum requirements, the general engineering requirements, and the degree requirements, which are listed below.
**Core Curriculum requirements:** Students seeking the Bachelor of Science degree in Electrical Engineering must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both major requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | Mathematics (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
Science (6 semester credit hours)  
Three hours from Level One and three hours from Level Two will satisfy this core requirement.  
Note: MAT 1214, CHE 1103, and PHY 1904 may be used to satisfy the Core Curriculum requirements for Domain I, as well as several of the General Engineering requirements. |
| **Domain II: Society and Culture** | United States History and Diversity (6 semester credit hours)  
Any six hours listed under this section in the list of core courses will satisfy this core requirement.  
Political Studies (6 semester credit hours)  
POL 1013 plus 3 additional hours under this section in the list of core courses will satisfy this core requirement.  
Social and Behavioral Sciences (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
Economics (3 semester credit hours)  
ECO 2023 Introductory Microeconomics |
| **Domain III: Literature and the Arts** | Literature (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
The Arts (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
| **Domain IV: Interdisciplinary Studies** | (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |

**General Engineering Requirements**

All degree-seeking candidates in engineering must complete the following 29 semester credit hours, as well as the Core Curriculum requirements and major requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 1103</td>
<td>General Chemistry</td>
</tr>
<tr>
<td>EGR 1303</td>
<td>Exploring the Engineering Profession</td>
</tr>
</tbody>
</table>
Degree Requirements

All degree-seeking candidates in Electrical Engineering must complete the following semester credit hours, as well as the Core Curriculum requirements and general engineering requirements:

A. 55 semester credit hours of required courses:

1. 49 semester credit hours of electrical engineering:

   ECO 2023  Introductory Microeconomics
   EGR 3323  Applied Engineering Analysis II
   EE 2423  Network Theory
   EE 2513  Logic Design
   EE 3113  Electrical Engineering Laboratory I
   EE 3213  Electromagnetic Engineering
   EE 3313  Electronic Circuits I
   EE 3413  Analysis and Design of Control Systems
   EE 3423  Signals and Systems I
   EE 3463  Microcomputer Systems I
   EE 3513  Electromechanical Systems
   EE 3523  Signals and Systems II
   EE 3563  Digital Systems Design
   EE 4113  Electrical Engineering Laboratory II
   EE 4313  Electronic Circuits II
   EE 4811  Electrical Engineering Design I
   EE 4813  Electrical Engineering Design II

2. 6 semester credit hours of supporting courses:

   CS 2073  Programming with Engineering Applications
   STA 3533  Probability and Random Processes
   or
   EE 3533  Random Signals and Noise

B. 15 semester credit hours of electrical engineering elective courses. At least three courses (9 hours) from one of the following concentrations must be selected.

Computer Engineering Concentration

   CS 3323  Topics in Programming Languages
   or
   CS 3733  Operating Systems
   EE 4243  Computer Organization and Architecture
   EE 4323  Advanced Electrical Engineering Laboratory
   EE 4513  Introduction to VLSI Design
   EE 4553  VLSI Testing
   EE 4573  Engineering Workstations
   EE 4583  Microcomputer Systems II
Communication and DSP System Engineering Concentration

EE 4323 Advanced Electrical Engineering Laboratory
EE 4613 Communication Systems
EE 4623 Digital Filtering
EE 4643 Digital Signal Processing
EE 4653 Digital Communication
EE 4663 Digital Image Processing
EE 4673 Data Communication and Networks
EE 4683 Wireless Communications

Control System Engineering Concentration

EE 4323 Advanced Electrical Engineering Laboratory
EE 4443 Discrete-Time and Computer-Controlled Systems
EE 4723 Intelligent Robotics
EE 4733 Intelligent Control
EE 4743 Embedded Control Systems
EE 4753 Computer Analysis of Power Systems

Other choices for elective courses include:

EE 4353 Introduction to Modern Optics
EE 4453 Principles of Bioengineering and Bioinstrumentation

COURSE DESCRIPTIONS

ELECTRICAL ENGINEERING
(EE)

2213 Electric Circuits and Electronics
(3-0) 3 hours credit. Prerequisites: PHY 1924 and PHY 1931; corequisite: MAT 3253 or EGR 2323.
Electric, magnetic, and electronic circuits; transient analysis, transforms, and phasors; transformers; solid state
devices; analog and digital circuits. Not open to electrical engineering majors. (Formerly EE 2214. Credit cannot
be earned for both EE 2213 and EE 2214.)

2423 Network Theory
(3-1) 3 hours credit. Prerequisites: completion of or concurrent enrollment in PHY 1924 and MAT 3253 or EE
2323, or EGR 2323.
Basic network principles; steady state responses to DC and AC signals; transient responses; nodal and loop
analysis; Laplace transforms; 2-port analysis; and use of SPICE to solve network problems. One hour of problem
solving recitation per week. (Formerly EE 2424. Credit cannot be earned for both EE 2423 and EE 2424.)

2513 Logic Design
(3-1) 3 hours credit. Prerequisite: Major in computer science, or completion of or concurrent enrollment in CS
2073.
Number systems, Boolean algebra, combinational and sequential circuit design; and minimization and
implementation. (Formerly EE 2514. Credit cannot be earned for both EE 2513 and EE 2514.) One hour of
problem solving recitation per week.

3113 Electrical Engineering Laboratory I
(1-6) 3 hours credit. Prerequisites: EE 2423, EE 2513, and completion of or concurrent enrollment in EE 3313.
Introduction to basic measurement equipment and techniques; use of analog and digital simulation tools;
comparison to empirical performance of simple analog communication and digital circuits using discrete devices
and circuits; simple subsystem circuit design; and laboratory technical communication.
3213 Electromagnetic Engineering
(3-0) 3 hours credit. Prerequisites: PHY 1924 and completion of or concurrent enrollment in EGR 3323.
Review of vector calculus, Maxwell’s equations, electromagnetic waves, dielectrics, and boundary conditions.
Selected other topics include wave guides, anisotropic crystal optics, transmission lines, fiber optics, reflection and
refraction, and special relativity.

3313 Electronic Circuits I
(3-1) 3 hours credit. Prerequisites: PHY 1924, EE 2423, and completion of or concurrent enrollment in EE 3423 or
ME 3323.
Electrical properties of semiconductors; P-N junctions; diode circuits; BJTs and FETs; application to digital and
analog circuits; and use of SPICE to solve simple circuits. One hour of problem solving recitation per week.

3413 Analysis and Design of Control Systems
(3-1) 3 hours credit. Prerequisites: EGR 2323 or MAT 3253; EE 3423 for electrical engineering majors; ME 3323 for
mechanical engineering majors.
Modeling, analysis, and design of linear automatic control systems; time and frequency domain techniques; stability
analysis, state variable techniques, and other topics. Control systems analysis and design software will be used. One
hour of problem solving recitation per week. (Formerly EE 4413. Credit cannot be earned for both EE 3413 and EE
4413.)

3423 Signals and Systems I
(3-1) 3 hours credit. Prerequisites: EGR 2323 or EE 2323, and EE 2423.
Frequency response and complex variables, Fourier series, Fourier transforms, Dirac Delta function, convolution,
mathematical modeling of systems, and the Z-transform. One hour of problem solving recitation per week.

3463 Microcomputer Systems I
(3-0) 3 hours credit. Prerequisites: EE 2513, CS 2073, and completion of or concurrent enrollment in EE 3563.
Introduction to assembly- and C-language programming; architecture, peripherals, operating system interfacing
principles, and development tools; and software documentation techniques. (Formerly EE 4563. Credit cannot be
earned for both EE 3463 and EE 4563.)

3513 Electromechanical Systems
(2-3) 3 hours credit. Prerequisites: EE 3213 and EGR 2213.
Principles of electromechanical energy conversion; polyphase circuits; dynamic analysis and simulation of energy-
transfer devices; and power devices.

3523 Signals and Systems II
(3-0) 3 hours credit. Prerequisite: EE 3423.
Time and frequency characteristics of signals and systems, sampling, and application of Laplace transforms and Z
transforms to linear time invariant systems and linear feedback systems.

3533 Random Signals and Noise
(3-0) 3 hours credit. Prerequisite: MAT 1223.
Probability, statistics, random variables, and random processes, with applications in electrical engineering.

3563 Digital Systems Design
(2-3) 3 hours credit. Prerequisite: EE 2513.
Introduction to switching theory; design of complex combinational and sequential circuits; analysis of hazards and
fault detection, location, and tolerance; and design and verification of complex circuitry using schematic entry,
functional modeling, and mixed-mode simulation.

4113 Electrical Engineering Laboratory II
(1-6) 3 hours credit. Prerequisites: EE 3113, EE 3463, and EE 4313.
Complex electronic circuit subsystem design; improving measurement system performance; introduction to
automatic test equipment, the design process, and simple system design; and technical communication.
4243 Computer Organization and Architecture  
(2-3) 3 hours credit. Prerequisites: EE 3463 and 3563.  
Design of advanced state machines and computer systems, and processor design using computer-assisted design and  
analysis tools. (Formerly EE 3583. Credit cannot be earned for both EE 4243 and EE 3583.)

4313 Electronic Circuits II  
(3-0) 3 hours credit. Prerequisites: EE 3313 and completion of or concurrent enrollment in EE 3523.  
Multiple transistor circuits; feedback and frequency response analysis; operational amplifier analysis and design;  
power semiconductors; and other topics. Design of analog and digital circuits; and use of SPICE to analyze complex  
circuits.

4323 Advanced Electrical Engineering Laboratory  
(1-6) 3 hours credit. Prerequisite: Consent of instructor.  
Laboratory experience in one of the following: controls, optics, digital systems, communications, or instrumentation.  
May be repeated when topic varies.

4353 Introduction to Modern Optics  
(3-0) 3 hours credit. Prerequisite: EE 3213.  
The basic principles of geometrical and physical optics. Topics include lens design, interference, diffraction, and  
polarization. Selected other topics may include Fourier optics, coherence theory, holography, lasers, Gaussian beams,  
aucusto-optics, electro-optics, and fiber-optic communications.

4443 Discrete-Time and Computer-Controlled Systems  
(2-3) 3 hours credit. Prerequisites: EE 3413 and completion of or concurrent enrollment in EE 3523.  
Sampled-data techniques applied to the analysis and design of digital control systems; stability criteria;  
compensation; and other topics.

4453 Principles of Bioengineering and Bioinstrumentation  
(2-3) 3 hours credit. Prerequisites: EE 3213, 3413, and completion of or concurrent enrollment in EE 4113.  
Theoretical basis for signal generation, transmission, and detection from biological systems; modeling of biological  
systems; electrodes and transducer systems; and signal excitation and processing instrumentation.

4513 Introduction to VLSI Design  
(2-3) 3 hours credit. Prerequisites: EE 3213, EE 4313, and completion of or concurrent enrollment in EE 4243 or  
4583 or consent of instructor.  
Design of integrated digital systems; logic simulation, standard cell libraries, circuit simulation, and other computer-  
aided design tools; and integrated circuit processing and device modeling.

4553 VLSI Testing  
(2-3) 3 hours credit. Prerequisite: EE 4513.  
Faults modeling and simulation; stuck at faults, bridging faults, and functional testing; self-testing concepts; standard  
and test patterns; device and system testing; and design for testability.

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; and networking considerations.

4583 Microcomputer Systems II  
(2-3) 3 hours credit. Prerequisites: EE 3463 and completion of or concurrent enrollment in EE 4313.  
Advanced microprocessor-based system design; high-speed bus interfacing, coprocessors, and other specialized  
input/output devices; and high-level languages and software performance analysis.
**4613 Communication Systems**  
(3-0) 3 hours credit. Prerequisites: EE 3423 and STA 3533 or EE 3533.  
Fundamentals of communication systems engineering using analog and digital techniques; and signal analysis,  
signal-to-noise ratio, and circuit implementations.

**4623 Digital Filtering**  
(3-0) 3 hours credit. Prerequisites: EE 4643 and completion of or concurrent enrollment in EE 3463.  
Design and implementation of FIR and IIR filters, hardware, and software; and topics from adaptive filtering, neural  
networks, and image processing.

**4643 Digital Signal Processing**  
(3-0) 3 hours credit. Prerequisites: Concurrent enrollment or completion of EE 3523, and STA 3533 or EE 3533.  
Transform techniques for discrete signal analysis; discrete representation and analysis of digital filters and other  
topics; and A/D and D/A conversion and associated filtering techniques.

**4653 Digital Communications**  
(3-0) 3 hours credit. Prerequisites: EE 3423 and STA 3533 or EE 3533.  
Matched filtering; bit error rate; inter-symbol interference; equalization; signal constellations; coherent versus non-  
coherent receivers; ASK, BPSK, QPSK, FSK, and QAM modulation; spread spectrum; TDMA versus CDMA;  
source coding and channel capacity; and error control coding.

**4663 Digital Image Processing**  
(3-0) 3 hours credit. Prerequisite: EE 4643.  
Fundamentals and some practical applications of digital image processing. Topics include image formation,  
sampling, and quantization; image motion and detector noise; image enhancement and restoration by spatial filtering  
and maximum entropy; image coding for bandwidth compression by DPCM, transform coding, and entropy coding;  
and image understanding.

**4673 Data Communication and Networks**  
(2-3) 3 hours credit. Prerequisite: Completion of or concurrent enrollment in EE 4613.  
Introduction to data communication networks, electrical interface, data transmission, WAN and LAN network  
overview, transmission devices, transmission errors and methods of correction, and protocols.

**4683 Wireless Communications**  
(2-3) 3 hours credit. Prerequisite: EE 3423, STA 3533 or EE 3533.  
Cellular radio concepts; large scale path loss models; fading and multipath; modulation schemes; coding and  
equalization; speech coding; multiple access techniques; common wireless standards; link budgets; RF hardware  
realization issues.

**4723 Intelligent Robotics**  
(2-3) 3 hours credit. Prerequisite: EE 3413 or ME 4523.  
Coordinate transformations, forward and inverse kinematics, Jacobian and static forces, path planning techniques,  
dynamics, design, analysis and control of robots, sensing and intelligence. (Formerly EGR 4723 and ME 4713. Credit  
cannot be earned for both EE 4723 and either EGR 4723 or ME 4713.)

**4733 Intelligent Control**  
(2-3) 3 hours credit. Prerequisite: EE 3413.  
Neural networks and fuzzy logic basics, approximation properties, conventional adaptive controller design and  
analysis, intelligent controller design and analysis techniques for nonlinear systems, and closed-loop stability.

**4743 Embedded Control Systems**  
(2-3) 3 hours credit. Prerequisites: EE 3413 and EE 3463.  
Embedded system principles and control system concepts, programming, tools and their applications, embedded  
controls design, and analysis of industrial processes.
4753 **Computer Analysis of Power Systems**  
(2-3) 3 hours credit. Prerequisites: EE 3513 and EE 3413.  
Principles of power generation, transmission and distribution, power systems control, and analysis and design of power system operation.

4811 **Electrical Engineering Design I**  
(1-0) 1 hour credit. Prerequisite: Concurrent enrollment or completion of EE 4113.  
Business planning and project management in engineering design; discussion of ethical and social issues in design; and selection of a design project, development of a detailed design proposal, and approval of a design project.

4813 **Electrical Engineering Design II**  
(1-6) 3 hours credit. Prerequisites: EE 4113 and EE 4811.  
Complex system design; advanced ATE; project management, proposals, status reporting, formal oral and written technical reports, and business plans; open-ended design project considering safety, reliability, environmental, economic, and other constraints; and ethical and social impacts.

4911-3 **Independent Study**  
1 to 3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the Department Chair, and Dean of the college.  
Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated for credit, but not more than 6 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4953 **Special Studies in Electrical Engineering**  
(3-0) 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 may be repeated for credit when topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.
DEPARTMENT OF MECHANICAL ENGINEERING

The Department of Mechanical Engineering offers a Bachelor of Science degree in Mechanical Engineering. The program is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET). Individuals enrolling in this degree program are given an opportunity to develop a strong background in the engineering sciences and to learn the analysis, design, and synthesis tools necessary to function well as active participants in many traditional, new, and emerging areas of technology.

The department has excellent laboratory facilities where students receive hands-on instruction by faculty. Computer-aided design (CAD) facilities, including state-of-the-art workstations, are routinely used. Some classes are taught by adjunct faculty from local industries, giving students the opportunity to interact with engineering professionals engaged in relevant engineering practice.

Because of the broad engineering training in this program, graduates may find employment in nearly all industries including companies or government agencies associated with aerospace, automotive, energy, petroleum, manufacturing, and research.

Bachelor of Science Degree in Mechanical Engineering

The Bachelor of Science degree in Mechanical Engineering (ME) offers students the opportunity to prepare for careers in traditional, new, and emerging technologies of mechanical engineering. Mechanical engineering is a versatile and broadly-based engineering discipline. Basic sciences and mathematics form the foundation of mechanical engineering, which requires an understanding of such subject areas as solid and fluid mechanics, thermal sciences, mechanical design, structures, material selection and processes, mechanical systems and control, and instrumentation.

The two main stems within mechanical engineering are: (1) energy (thermal/fluid sciences) and (2) structures and motion in mechanical systems. Through required coursework, the mechanical engineering curriculum provides educational training in both stems. Through the selection of technical elective courses to augment required courses, students may develop a degree of specialization and depth in one of the two main stems. Design experience is integrated throughout the program. Development of open-ended problem solving skills is a part of all mechanical engineering courses. Design projects with formal report writing are included in many of the required courses, including ME 1403 Engineering Graphics and Design, ME 3513 Mechanism Design, ME 4293 Thermodynamic II, ME 4313 Heat Transfer and Rate Processes, and ME 4603 Finite Element Applications in Mechanical Design. A substantial portion of each technical elective course is devoted to design of systems and components. A capstone design sequence at the senior level provides an opportunity to apply and integrate the knowledge gained throughout the curriculum to the development of an instructor-approved project.

The laboratory requirements are designed to provide the hands-on experience of application of classroom theory. The required laboratories expose undergraduate students to modern measurements and instrumentation techniques. The design of experiments is integrated in both the mechanical systems and control, thermal, and fluid laboratories. Students may receive additional hands-on experiences by selecting technical elective courses with laboratory components.

In addition, opportunities exist for students to participate in research and design projects. Those students eligible for honors may work on more individualized projects. Students also have an opportunity to participate in an approved co-op program and may receive up to three semester credit hours for their experience.

The educational objectives of the mechanical engineering program are:

1. to develop the understanding of and ability to apply the fundamentals of mathematics and physical sciences to practical engineering problems
2. to develop the capacity for lifelong learning needed by professional engineers
3. to develop the capacity for effective technical communication
4. to prepare students to be effective engineers in the rapidly changing 21st century
5. to prepare students to work in teams and understand the advantages of teamwork
6. to develop creative problem solving and innovative design skills for thermal and mechanical systems
7. to instill an appreciation for the role of the engineering profession and its ethical responsibilities in society

The mechanical engineering program has implemented a procedure to assess the following outcomes:

1. an ability to identify, formulate, and analyze the performance of thermal and mechanical systems using principles from chemistry, calculus-based physics, statistics, linear algebra, multivariate calculus, and differential equations
2. an ability to comprehend, interpret, and apply technical advances in science, mathematics, and engineering
3. an ability to use modern computer-based tools for engineering applications
4. an ability to communicate effectively through written, oral, and graphical presentations
5. an ability to design and conduct experiments to gauge or verify the performance of systems, as well as analyze and interpret experimental data
6. an ability to work effectively on a team project
7. an ability to creatively develop designs that achieve desired performance criteria within specified constraints and limitations
8. an understanding of ethical and societal responsibilities of professional engineers

All candidates for this degree must fulfill the Core Curriculum requirements, the general engineering requirements, and the degree requirements, which are listed below.

**Core Curriculum requirements:** Students seeking the Bachelor of Science degree in Mechanical Engineering must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both major requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

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<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rhetoric</strong> (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement: ENG 1013 Freshman Composition ENG 1023 Discourse across the Disciplines</td>
</tr>
<tr>
<td><strong>Domain I: Mathematics and Science</strong></td>
<td><strong>Mathematics</strong> (3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement. <strong>Science</strong> (6 semester credit hours) Three hours from Level One and three hours from Level Two will satisfy this core requirement. Note: MAT 1214, CHE 1103, and PHY 1904 may be used to satisfy the Core Curriculum requirements for Domain I, as well as several of the General Engineering requirements.</td>
</tr>
<tr>
<td><strong>Domain II: Society and Culture</strong></td>
<td><strong>United States History and Diversity</strong> (6 semester credit hours) Any six hours listed under this section in the list of core courses will satisfy this core requirement. <strong>Political Studies</strong> (6 semester credit hours) POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement. <strong>Social and Behavioral Sciences</strong> (3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement. <strong>Economics</strong> (3 semester credit hours) ECO 2023 Introductory Microeconomics</td>
</tr>
</tbody>
</table>
General Engineering Requirements

All degree-seeking candidates in engineering must complete the following 29 semester credit hours, as well as the Core Curriculum requirements and major requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 1103</td>
<td>General Chemistry</td>
</tr>
<tr>
<td>EGR 1303</td>
<td>Exploring the Engineering Profession</td>
</tr>
<tr>
<td>EGR 2213</td>
<td>Statics and Dynamics</td>
</tr>
<tr>
<td>EGR 2323</td>
<td>Applied Engineering Analysis I</td>
</tr>
<tr>
<td>MAT 1214</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MAT 1223</td>
<td>Calculus II</td>
</tr>
<tr>
<td>PHY 1904</td>
<td>Technical Physics I and Laboratory</td>
</tr>
<tr>
<td>PHY 1924</td>
<td>Technical Physics II and Laboratory</td>
</tr>
</tbody>
</table>

Degree Requirements

All degree-seeking candidates in Mechanical Engineering must complete the following semester credit hours, as well as the Core Curriculum requirements and general engineering requirements:

A. 31 semester credit hours of required foundation and general mechanical engineering courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 2023</td>
<td>Introductory Microeconomics</td>
</tr>
<tr>
<td>EE 2213</td>
<td>Electric Circuits and Electronics</td>
</tr>
<tr>
<td>EGR 3323</td>
<td>Applied Engineering Analysis II</td>
</tr>
<tr>
<td>ME 1403</td>
<td>Engineering Graphics and Design</td>
</tr>
<tr>
<td>ME 3173</td>
<td>Numerical Methods in Mechanical Engineering</td>
</tr>
<tr>
<td>ME 3241</td>
<td>Materials Engineering Laboratory</td>
</tr>
<tr>
<td>ME 3243</td>
<td>Materials Engineering</td>
</tr>
<tr>
<td>ME 3312</td>
<td>Electronics and Data Acquisition Laboratory</td>
</tr>
<tr>
<td>ME 4811</td>
<td>Mechanical Engineering Design Project Planning</td>
</tr>
<tr>
<td>ME 4813</td>
<td>Mechanical Engineering Design Project</td>
</tr>
<tr>
<td>STA 2303</td>
<td>Applied Probability and Statistics for Engineers</td>
</tr>
</tbody>
</table>

3 semester credit hours of approved mathematics or science electives. A list of acceptable courses is available in the College of Engineering.

B. 14 semester credit hours of required courses in the “energy” stem of mechanical engineering:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME 3293</td>
<td>Thermodynamics I</td>
</tr>
<tr>
<td>ME 3663</td>
<td>Fluid Mechanics</td>
</tr>
<tr>
<td>ME 4293</td>
<td>Thermodynamics II</td>
</tr>
<tr>
<td>ME 4313</td>
<td>Heat Transfer and Rate Processes</td>
</tr>
<tr>
<td>ME 4802</td>
<td>Thermal and Fluid Laboratory</td>
</tr>
</tbody>
</table>

Domain III: Literature and the Arts

<table>
<thead>
<tr>
<th>Literature (3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

The Arts (3 semester credit hours)

<table>
<thead>
<tr>
<th>The Arts (3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

Domain IV: Interdisciplinary Studies

<table>
<thead>
<tr>
<th>Literature (3 semester credit hours)</th>
<th>The Arts (3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>
C. 17 semester credit hours of required courses in the “structures and motions of mechanical systems” stem:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME 3103</td>
<td>Kinematics and Dynamics</td>
</tr>
<tr>
<td>ME 3513</td>
<td>Mechanism Design</td>
</tr>
<tr>
<td>ME 3813</td>
<td>Solid Mechanics</td>
</tr>
<tr>
<td>ME 4523</td>
<td>Dynamic Systems and Control</td>
</tr>
<tr>
<td>ME 4603</td>
<td>Finite Element Applications in Mechanical Design</td>
</tr>
<tr>
<td>ME 4702</td>
<td>Mechanical Systems and Control Laboratory</td>
</tr>
</tbody>
</table>

D. 9 semester credit hours of mechanical engineering elective courses. Each student must choose one of the technical area options listed below. Students are encouraged to select either option I or option II to develop technical specialization in one of the two main stems of mechanical engineering. However, students who wish to obtain a broader engineering training may choose option 3, general mechanical engineering. The combined course selection from each option area must contain a minimum of 4 semester credit hours of design. Information on design content hours for mechanical engineering courses is available in the College of Engineering. With prior approval, EGR 4993 Honors Research, ME 4953 Special Studies in Mechanical Engineering, or ME 4963 Topics in Bioengineering may be used as a technical elective. Exceptional undergraduate students may enroll in a graduate course and apply the credit earned to the undergraduate degree requirements. Approval forms are available in the Dean’s Office.

Option I-Specialization in Energy (Thermal/Fluid Systems):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME 4183</td>
<td>Compressible Flow and Propulsion Systems</td>
</tr>
<tr>
<td>ME 4323</td>
<td>Thermal Systems Design</td>
</tr>
<tr>
<td>ME 4343</td>
<td>Heating, Air Conditioning, and Refrigeration Design</td>
</tr>
<tr>
<td>ME 4613</td>
<td>Power Plant Systems Design</td>
</tr>
<tr>
<td>ME 4623</td>
<td>Internal Combustion Engines</td>
</tr>
<tr>
<td>ME 4663</td>
<td>Fluid Systems Design</td>
</tr>
<tr>
<td>ME 4963</td>
<td>Topics in Bioengineering</td>
</tr>
</tbody>
</table>

Option II-Specialization in Structures and Motions of Mechanical Systems:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME 3263</td>
<td>Materials Processing</td>
</tr>
<tr>
<td>ME 3323</td>
<td>Dynamics of Mechanical Systems</td>
</tr>
<tr>
<td>ME 3823</td>
<td>Machine Element Design</td>
</tr>
<tr>
<td>ME 4243</td>
<td>Intermediate Materials Engineering</td>
</tr>
<tr>
<td>ME 4723</td>
<td>Reliability and Quality Control in Engineering Design</td>
</tr>
<tr>
<td>ME 4963</td>
<td>Topics in Bioengineering</td>
</tr>
</tbody>
</table>

Option III–General Mechanical Engineering:

Courses selected from any of the previous two option areas.

COURSE DESCRIPTIONS
MECHANICAL ENGINEERING (ME)

1403 Engineering Graphics and Design
(2-3) 3 hours credit. Prerequisite: EGR 1303.
Introduction to engineering graphics: geometric constructions, multi-view drawing, dimensioning, sections, pictorials and auxiliary views. Computer-aided design, generation of mechanical drawings, and design projects.
3103  Kinematics and Dynamics  
(3-1) 3 hours credit. Prerequisites: EGR 2213 and EGR 2323.  
Kinematics and kinetics of plane rigid bodies, equations of motion, work and energy, impulse momentum, and impact. One hour of problem solving recitation.

3173  Numerical Methods in Mechanical Engineering  
(2-3) 3 hours credit. Prerequisite: EGR 2323.  
Introduction to computational methods including application of Taylor series in numerical techniques, finding roots of functions, solution of linear algebraic equations and matrices, curve fitting procedures, numerical differentiation, integration, and solutions to differential equations. Introduction to basic software packages in engineering applications.

3241  Materials Engineering Laboratory  
(0-3) 1 hour credit. Corequisite: ME 3243.  
Investigation of the properties of engineering materials, with emphasis on metals, sample preparation, metallography, and foundry processes. (Formerly ME 2241. Credit cannot be earned for both ME 3241 and ME 2241.)

3243  Materials Engineering  
(3-0) 3 hours credit. Prerequisites: CHE 1103 and EGR 2213.  
Fundamentals in structures, properties, and mechanical behavior of engineering materials. (Formerly ME 2243. Credit cannot be earned for both ME 3243 and ME 2243.)

3263  Materials Processing  
(2-3) 3 hours credit. Prerequisites: ME 3103 and ME 3243.  
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. Prerequisites: EGR 2323 and PHY 1904.  
Introduction to classical thermodynamics, fluid mechanics, and heat transfer, thermodynamics systems, first and second laws, thermodynamic cycles, fluid statics and dynamics, applications of conduction, convection, and radiation heat transfer. Not open to students majoring in mechanical engineering. May not be substituted for ME 3293, 3663, or 4313.

3293  Thermodynamics I  
(3-1) 3 hours credit. Prerequisite: EGR 2213.  
Heat, work, kinetic theory of gases, equation of state, thermodynamics system, control volume, first and second law of thermodynamics, reversible and irreversible processes, and introduction to basic thermodynamic cycles. One hour of problem solving recitation.

3312  Electronics and Data Acquisition Laboratory  
(0-6) 2 hours credit. Prerequisites: STA 2303 and credit or enrollment in EE 2213.  
Basic experiments with electrical networks, electronic circuits; introduction to computer assisted data acquisition systems and experimental design, comparison of computer-derived models and experimental results.

3323  Dynamics of Mechanical Systems  
(3-0) 3 hours credit. Prerequisite: ME 3103.  
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.

3513  Mechanism Design  
(3-1) 3 hours credit. Prerequisites: ME 1403 and ME 3103.  
Introduction to mechanisms; displacement, velocity, and acceleration analysis of mechanisms; graphical and linear analytical methods for kinematic synthesis and gear trains, graphical and analytical design of cam-follower systems, and computer-aided design projects.
Fluid Mechanics
(3-0) 3 hours credit. Prerequisites: EGR 3323, ME 3103; and credit for or enrollment in ME 3293.
Fluid properties; fluid statics; integral and differential analysis of fluid flow; viscous laminar and turbulent flow in conduits; dimensional analysis; boundary layer concepts; drag and lift.

Solid Mechanics
(3-1) 3 hours credit. Prerequisites: EGR 2323 and ME 3243.
Internal forces and deformations in solids; stress, strain and their relations, torsion, stresses and deflections in beams, elastic behavior of columns. One hour of problem solving recitation.

Machine Element Design
(3-1) 3 hours credit. Prerequisites: ME 3513 and ME 3813.
Introduction to design of machine elements, welded and bolted connections, design of spur and helical gears, design of couplings, clutches, and brakes; and computer-aided design projects. (Formerly ME 4423. Credit cannot be earned for both ME 3823 and ME 4423).

Compressible Flow and Propulsion Systems
(3-0) 3 hours credit. Prerequisites: ME 3293 and ME 3663.
Application of mass, energy, and force balance to compressible fluids; analysis of one-dimensional steady flow, isentropic flow, adiabatic flow, flow with heat addition, supersonic flow, and shock waves. Introduction to the analysis and design of air-breathing engines for aeronautical transportation. (Formerly EGR 4183. Credit cannot be earned for both ME 4183 and EGR 4183.)

Intermediate Materials Engineering
(3-0) 3 hours credit. Prerequisites: ME 3241, ME 3243, and ME 3813.
Selected topics in macroscopic and microscopic aspects of the mechanical behavior of metals, ceramics, and polymers; introduction to dislocation theory, temperature dependent deformations, engineering failures, and fracture mechanics.

Thermodynamics II
(3-0) 3 hours credit. Prerequisites: EGR 3323 and ME 3293.
Energy and availability analysis, reactive and non-reactive mixtures, moist air properties, psychometric systems and analysis, vapor and gas power cycles, refrigeration and heat-pump cycles, and thermodynamic relations.

Heat Transfer and Rate Processes
(3-0) 3 hours credit. Prerequisites: EGR 3323, ME 3293, ME 3173, and credit or enrollment in ME 3663.
Generalized potential distribution and gradients; transient and steady heat transfer including conduction, forced and free convection, and radiation.

Thermal Systems Design
(3-1) 3 hours credit. Prerequisites: ME 3663 and credit or enrollment in ME 4313.
Application of basic thermodynamics, fluid mechanics, heat transfer, and computer methods to the design of heat exchangers, coils, fans, pumps, and thermal energy systems.

Heating, Air Conditioning, and Refrigeration Design
(3-1) 3 hours credit. Prerequisites: ME 4293 and credit or enrollment in ME 4313.
Moist air properties; human comfort; solar radiation; heating, ventilation, and air conditioning of buildings; design selection, construction, and operation of air conditioning equipment; and duct design.

Dynamic Systems and Control
(3-0) 3 hours credit. Prerequisites: EGR 3323 and ME 3103.
Introduction to modeling and control of dynamic physical systems, analysis and design of control systems for mechanical, electrical, manufacturing, fluid, and thermal systems. (Formerly ME 4522. Credit cannot be earned for both ME 4523 and ME 4522.)
4603  Finite Element Applications in Mechanical Design  
(2-3) 3 hours credit. Prerequisites: ME 1403 and ME 3813.  
Finite element method fundamentals, advanced geometric modeling of mechanical components and systems, static  
failure theories, modeling of components, and design case studies/design projects using a commercial finite element  
program.

4613  Power Plant System Design  
(3-1) 3 hours credit. Prerequisites: ME 3663 and ME 4293.  
Application of thermodynamics and fluid mechanics to the design of vapor and gas-turbine power plant systems  
including boilers, condensers, turbines, pumps, compressors, and cooling towers.

4623  Internal Combustion Engines  
(3-1) 3 hours credit. Prerequisite: ME 4293.  
Application of thermodynamics cycles in design, analysis, and modeling of internal combustion engines including  
spark-ignition and compression–ignition cycles; thermochemistry, fuels, combustion, emissions, and pollution.

4663  Fluid Systems Design  
(3-1) 3 hours credit. Prerequisites: ME 3663 and ME 3173.  
Review of fundamental laws in integral form; differential continuity, momentum, and energy equations; Navier-Stokes  
equations for laminar and turbulent flow; Potential flow theory; and design of fluid systems.

4702  Mechanical Systems and Control Laboratory  
(0-6) 2 hours credit. Prerequisites: ME 3312, ME 3813, and credit for or enrollment in ME 4523.  
Fundamentals of measurement systems; transducers and signal conditioning; strain, force, acceleration, controls and  
vibration; rotating machinery; and design of experiments.

4723  Reliability and Quality Control in Engineering Design  
(3-0) 3 hours credit. Prerequisites: EGR 3323 and STA 2303.  
Introduction to statistical methods in reliability and probabilistic engineering design methodology; statistical quality  
control and inspection; life prediction and testing; and design optimization.

4802  Thermal and Fluid Laboratory  
(0-6) 2 hours credit. Prerequisites: ME 3312 and ME 3663, and credit for or enrollment in ME 4313.  
An experimental laboratory concerned with fluid statics, fluid flow, heat transfer, internal combustion engines, and  
design of experiments.

4811  Mechanical Engineering Design Project Planning  
(0-3) 1 hour credit. Prerequisites: ECO 2023 and credit for or enrollment in ME 4313 and ME 4603.  
Development, presentation, and approval of design project proposals, conceptual design, computer-aided synthesis,  
analysis, and modeling of an open-ended problem. Industrial cooperation is encouraged.

4813  Mechanical Engineering Design Project  
(2-3) 3 hours credit. Prerequisite: ME 4811, ME 4313, and ME 4603.  
Development of a working design of an instructor-approved design project using computer-aided synthesis, analysis,  
modeling, and optimization methods. Industrial cooperation encouraged; considerations of safety, reliability,  
environmental, and economic constraints; and ethical and social impacts.

4911-3 Independent Study  
1 to 3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the  
Department Chair and Dean of the college.  
Independent reading, research, discussion, and/or writing under the direction of a faculty member. May be repeated  
for credit, but not more than 6 semester credit hours of independent study, regardless of discipline, will apply to a  
bachelor’s degree.
4953  **Special Studies in Mechanical Engineering**  
(3-0) 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 may be repeated for credit when topics vary, but not more than 6 semester 
credit hours, regardless of discipline, will apply to a bachelor’s degree.

4963  **Topics in Bioengineering**  
(3-0) 3 hours credit. Prerequisites: Will depend on the topics.  
Topics may include: Biomechanics, biological systems and medical devices, properties and compatibility of 
biomaterials, biofluids and transport phenomena. May be repeated for credit when topics vary.
RESERVE OFFICER TRAINING CORPS PROGRAMS

Air Force ROTC: UTSA students may enroll in courses that are required in order to become a commissioned officer in the United States Air Force. The Air Force Reserve Officer Training Corps (ROTC) is voluntary and open to all qualified students, male and female. All courses are held on the UTSA campus.

Trinity University, St. Mary’s University, University of the Incarnate Word, Our Lady of the Lake University, or any Alamo Community College student may enroll in Air Force ROTC at UTSA. These students will attend classes on the UTSA campus.

Nursing students at The University of Texas Health Science Center may enroll in Air Force ROTC at UTSA.

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 UTSA and completion of either the Four-Year Program or the Two-Year Program in Aerospace Studies is required. 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.

Credit for aerospace studies courses may be applied toward a baccalaureate degree, but mainly as free electives. There is a maximum number of semester credit hours of aerospace studies that may be applied to the degree requirements for each major. Credit for aerospace studies courses awarded by another accredited college or university is accepted by UTSA as credit, within the same limitations as aerospace studies credit earned at the University.

Four-Year Program: This program does not require a formal application for admission and consists of 16 semester credit hours of aerospace studies. 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 UTSA 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 summer between their sophomore and junior years.

Two-Year Program: This program consists of the Professional Officer Course (POC), the last two years of the Four-Year Program, and requires 12 semester credit hours. Acceptance into the Two-Year Program is based on competitive standards, and students must be accepted by the Air Force before registration for classes. Students interested in the program are encouraged to start the application process in the 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 in Air Force ROTC are issued books and uniforms for use in ROTC classes. In addition, all POC students enlist in the Air Force Reserve and receive a monthly subsistence allowance.

A required leadership laboratory graded on a pass/fail basis is conducted in conjunction with all aerospace studies courses. This 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 cadets with opportunities to learn about the conduct of Air Force missions and operations through guest lectures and field trips.

Cadets may apply for Air Force ROTC scholarships. Three- and two-year scholarships are available 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. Two-Year Program applicants may apply for two-year scholarships the summer before the entry into the POC.
Minor in Aerospace Studies

This minor is designed to enhance the aerospace studies (Air Force Reserve Officer Training Corps) curriculum. A Minor in Aerospace Studies (ASC) will develop a well-rounded perspective of a future Air Force officer’s role and decision-making ability in political, sociological, historical, and geographical arenas.

All students pursuing a Minor in Aerospace Studies must complete 20 semester credit hours.

A. 2 semester credit hours of required core courses:
   - ASC 2031 The Evolution of United States Air Force Air and Space Power I
   - ASC 2041 The Evolution of United States Air Force Air and Space Power II

B. 9 semester credit hours (6 of which must be at the upper-division level) selected from the following:
   - ASC 1031 The Foundation of the United States Air Force I
   - ASC 1041 The Foundation of the United States Air Force II
   - ASC 3013 Air Force Leadership Studies I
   - ASC 3023 Air Force Leadership Studies II
   - ASC 4013 National Security Affairs/Preparation for Active Duty I
   - ASC 4023 National Security Affairs/Preparation for Active Duty II

C. 9 semester credit hours (6 of which must be upper-division level) selected from the following:
   - GRG 1023 World Regional Geography
   - GRG 3314 Cartography and Geographic Information Systems
   - GRG 3643 Political Geography
   - HIS 3823 History of American Foreign Policy
   - POL 1083 The United States in the World
   - POL 2603 International Politics
   - POL 3293 Political Movements
   - POL 3343 Communism and Post-Communism
   - POL 3403 European Politics
   - POL 3423 Politics in Russia and the Post-Soviet States
   - POL 3433 Governments and Politics of Southeast Asia
   - POL 3443 Governments and Politics of East Asia
   - POL 3463 Politics of the Third World
   - POL 3493 Politics of the Middle East
   - POL 3503 American Foreign Policy since World War II
   - POL 3523 Force in International Politics
   - PSY 2533 Social Psychology
   - SOC 3103 Complex Organization
   - SOC 4063 Civil-Military Relations

To declare a Minor in Aerospace Studies, obtain advice, or seek approval of substitutions for course requirements, students should consult the professor of aerospace studies in the College of Engineering.
COURSE DESCRIPTIONS
AEROSPACE STUDIES
(ASC)

1031  The Foundation of the United States Air Force I
(1-1) 1 hour credit.
A survey course designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps. Focuses on mission and organization of the Air Force, officer professionalism, military customs and courtesies, Air Force opportunities, and an introduction to communication skills. Leadership Laboratory is mandatory for AFROTC cadets and compliments the course by providing cadets with followership experiences.

1041  The Foundation of the United States Air Force II
(1-1) 1 hour credit.
A continuation of ASC 1031, students progress in acquiring skills and demonstrating their proficiency. Leadership Laboratory is mandatory for AFROTC cadets and compliments the course by providing cadets with followership experiences.

2031  The Evolution of United States Air Force Air and Space Power I
(1-1) 1 hour credit.
Examines general aspects of air and space power through a historical perspective. Covers a time period from the first balloons and dirigibles to the space-age global positioning systems of the Persian Gulf War. Historical examples are provided to extrapolate development of AF capabilities and missions to demonstrate the evolution of today’s USAF air and space power. Examines several fundamental truths associated with war in the third dimension. Reviews importance of AF core values with use of operational examples and historical AF leaders. Stresses development of communication skills. Leadership Laboratory is mandatory for AFROTC cadets and compliments the course by providing cadets with followership experiences.

2041  The Evolution of United States Air Force Air and Space Power II
(1-1) 1 hour credit.
A continuation of ASC 2031, students progress in acquiring skills and demonstrating their proficiency. Leadership Laboratory is mandatory for AFROTC cadets and compliments the course by providing cadets with followership experiences.

3013  Air Force Leadership Studies I
(3-1) 3 hours credit.
A study of leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, leadership ethics, and communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. Leadership Laboratory is mandatory for AFROTC cadets and compliments the course by providing advanced leadership experiences in officer-type activities, giving students the opportunity to apply leadership and management principles.

3023  Air Force Leadership Studies II
(3-1) 3 hours credit.
A continuation of ASC 3013, students progress in acquiring skills and demonstrating their proficiency. Leadership Laboratory is mandatory for AFROTC cadets and compliments the course by providing advanced leadership experiences in officer-type activities, giving students the opportunity to apply leadership and management principles.

4013  National Security Affairs/Preparation for Active Duty I
(3-1) 3 hours credit.
Examines the national security process, regional studies, advanced leadership ethics, and Air Force doctrine. Special topics of interest focus on the military as a profession, officer professionalism, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Within the structure, continued emphasis is given to refining communication skills. Leadership Laboratory is mandatory for AFROTC cadets and compliments the course by providing advanced leadership experiences in officer-type activities, giving students the opportunity to apply leadership and management principles.
4023 National Security Affairs/Preparation for Active Duty II
(3-1) 3 hours credit.
Continuation of ASC 4013, students progress in acquiring skills and demonstrating their proficiency. Leadership Laboratory is mandatory for AFROTC cadets and compliments the course by providing advanced leadership experiences in officer-type activities, giving students the opportunity to apply leadership and management principles.
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COLLEGE OF LIBERAL AND FINE ARTS

DEPARTMENT OF ANTHROPOLOGY

The Department of Anthropology offers a Bachelor of Arts degree in Anthropology and minors in Anthropology and American Indian Studies. Honors may also be earned in Anthropology.

Department Honors

The Department of Anthropology awards Department Honors to certain of its outstanding students and provides the opportunity for advanced study under close faculty supervision.

Selection of students for honors designation is based on the student’s academic performance and recommendation by the faculty in the student’s major discipline. To be eligible for the program, students must have a minimum overall grade point average of 3.0 at UTSA and a minimum grade point average of 3.5 in their major at UTSA. The minimum grade point averages must be maintained for students to receive the approval of the Department Honors Committee and the discipline faculty. Students applying for Department Honors are expected to enroll in the appropriate honors thesis course during their final two semesters. The completed thesis must be approved by the supervising faculty sponsor and another departmental faculty member.

Students interested in this program should contact their faculty advisors for additional information.

Bachelor of Arts Degree in Anthropology

The minimum number of semester credit hours required for this degree, including the Core Curriculum requirements, is 120. Thirty-nine of the total semester credit hours required for the degree must be at the upper-division level.

All candidates for this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Arts degree in Anthropology must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | Mathematics (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
Science (6 semester credit hours)  
Three hours from Level One (including ANT 2033 Introduction to Physical Anthropology or ANT 2043 Introduction to Archaeology) and three hours from Level Two will satisfy this core requirement. |
Degree Requirements

A. 39 semester credit hours in the major, 27 of which must be at the upper-division level:

1. 12 semester credit hours of required courses:
   - ANT 2033 Introduction to Physical Anthropology
   - ANT 2043 Introduction to Archaeology
   - ANT 2053 Introduction to Cultural Anthropology
   - ANT 2063 Language, Thought, and Culture

2. 9 upper-division semester credit hours chosen in consultation with the student’s advisor:
   - 3 semester credit hours in archaeology
   - 3 semester credit hours in cultural anthropology
   - 3 semester credit hours in physical anthropology

3. 18 additional upper-division semester credit hours of anthropology electives excluding ANT 4913 Independent Study, chosen in consultation with the student’s advisor.

B. 9 semester credit hours of work from another discipline that 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 faculty advisor after completion of 12 semester credit hours of anthropology. Recommended areas for support work include, but are not limited to, foreign languages, statistics, computer science, earth sciences, environmental sciences, and social sciences. The student should file a statement of intent and the list of courses to be taken in the support area with the undergraduate advisor for Anthropology in the College of Liberal and Fine Arts Advising Center.

C. 30 semester credit hours of electives
Minor in Anthropology

All students pursuing a Minor in Anthropology must complete 18 semester credit hours.

A. 9 semester credit hours of courses selected from the following:

- ANT 2033 Introduction to Physical Anthropology
- ANT 2043 Introduction to Archaeology
- ANT 2053 Introduction to Cultural Anthropology
- ANT 2063 Language, Thought, and Culture

B. 9 additional upper-division semester credit hours:

- 3 semester credit hours in archaeology
- 3 semester credit hours in cultural anthropology
- 3 semester credit hours in physical anthropology

To declare a Minor in Anthropology, obtain advice, obtain lists of relevant courses, or seek approval of substitutions for course requirements, students should consult the undergraduate advisor for Anthropology in the College of Liberal and Fine Arts Advising Center.

Minor in American Indian Studies

Eighteen semester credit hours are required for the Minor in American Indian Studies, at least 9 semester credit hours of which must be drawn from outside a student’s major. Hours are selected from the following:

- AHC 3423 Pre-Columbian Art and Architecture of Mesoamerica
- ANT 3153 Indians of the Great Plains
- ANT 3163 Indians of Texas
- ANT 3253 Archaeology of South America
- ANT 3263 Archaeology of North America
- ANT 3273 Ancient Civilizations of Mesoamerica
- ANT 3323 Native American Art
- ANT 3363 Indians of Mesoamerica
- ANT 4113 Archaeology of Texas
- ANT 4123 Archaeology of the American Southwest
- ANT 4133 Indians of Texas
- HIS 3063 The Spanish Borderlands, 1521-1821
- HIS 3073 The Mexican Borderlands/The American Southwest
- HIS 3083 History of the American West
- HIS 3113 The American Indian
- HIS 3403 Pre-Hispanic and Colonial Latin America
- SOC 3133 Sociology of Pluralism in the Southwest

To declare a Minor in American Indian Studies, obtain advice, obtain lists of relevant courses, or seek approval of substitutions for course requirements, students should consult the undergraduate advisor for Anthropology in the College of Liberal and Fine Arts Advising Center.
COURSE DESCRIPTIONS
ANTHROPOLOGY
(ANT)

1001 Freshman Topics in Anthropology
(1-1) 1 hour credit.
Required for entering freshmen in the College of Liberal and Fine Arts with less than 15 hours of coursework and who are interested in majoring in Anthropology. Critical study of topics in anthropology. Innovative classroom and learning techniques are used to introduce students to these topics and to help strengthen critical thinking, problem solving, and writing skills. A maximum of three semester credit hours of freshman topics courses may apply to a bachelor’s degree, although this specific topic may be taken only once.

1013 Introduction to Anthropology
(3-0) 3 hours credit.
The study of human culture, past and present; its origin, development, and contemporary change; and the exploration of human physical and cultural differences using the paradigm of adaptation. [TCCN: ANTH 2346.]

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. [TCCN: ANTH 2301.]

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. [TCCN: ANTH 2302.]

2053 Introduction to Cultural Anthropology
(3-0) 3 hours credit.
This course discusses culture and other basic anthropological concepts and their use in understanding variation in economy, social structure, and ideology. Ethnographic descriptions provide examples of cross-cultural variation. Attention is also given to processes governing culture continuity and change. (Credit cannot be earned for both ANT 2023 and ANT 2053.) [TCCN: ANTH 2351.]

2063 Language, Thought, and Culture
(3-0) 3 hours credit.
This course surveys anthropological approaches to the study of language, emphasizing the relation between language and worldview, and the social uses of speech. Instruction is given in the fundamentals of descriptive linguistics. The biological basis of language and patterns of historical development are also examined. (Credit cannot be earned for both ANT 2023 and ANT 2063.)

3103 Social Organization
(3-0) 3 hours credit. Prerequisite: ANT 1013 or ANT 2053 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 ANT 2053 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3153</td>
<td>Indians of the Great Plains</td>
<td>(3-0) 3 hours</td>
<td>Examination of the fundamental cultural transformation and flourishing of Native American societies of the Great Plains following the introduction of the horse. Attention is also given 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.</td>
</tr>
<tr>
<td>3173</td>
<td>Ethnomedicine: Theory and Applications</td>
<td>(3-0) 3 hours</td>
<td>Integration of sociocultural 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 biethnic social situations, cross-cultural studies of mental health, and the analysis of cross-ethnic programs of medical care receive attention.</td>
</tr>
<tr>
<td>3223</td>
<td>Cultural Ecology</td>
<td>(3-0) 3 hours</td>
<td>Human adaptation to the environment and interaction with it, comparing simple and complex societies in various environmental contexts.</td>
</tr>
<tr>
<td>3253</td>
<td>The Archaeology of South America</td>
<td>(3-0) 3 hours</td>
<td>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 may be discussed.</td>
</tr>
<tr>
<td>3263</td>
<td>Archaeology of North America</td>
<td>(3-0) 3 hours</td>
<td>Survey of prehistoric cultures in North America from earliest times to historic contact. May include discussion of Ice Age mammoth hunters, Eastern mound-building cultures, Southwestern pueblo cultures, and Plains bison hunters. Chronology, sites, settlement and subsistence patterns, and recent research issues may be considered.</td>
</tr>
<tr>
<td>3273</td>
<td>Ancient Civilizations of Mesoamerica</td>
<td>(3-0) 3 hours</td>
<td>Examination of the development of the ancient civilizations of Guatemala, Mexico, and Central America: Olmec, Teotihuacan, Maya, Toltec, Aztec, and Zapotec, among others.</td>
</tr>
<tr>
<td>3293</td>
<td>Research Methods in Anthropology</td>
<td>(3-0) 3 hours</td>
<td>Quantitative analysis and computer applications as used in anthropological research.</td>
</tr>
<tr>
<td>3323</td>
<td>Native American Art</td>
<td>(3-0) 3 hours</td>
<td>A survey of the traditional arts of Native Americans north of the Rio Grande, focusing on case studies from the Arctic, the Northwest Coast, the Great Plains, the Southwest, and the Northeast. Arts of the sacred and the secular, the domestic and the political, and the ceremonial and the commercial are examined from pre-contact to the present day.</td>
</tr>
<tr>
<td>3333</td>
<td>Physical Anthropology of Human Populations</td>
<td>(3-0) 3 hours</td>
<td>Examines the biological variability of living populations; includes genetics, anatomy, demography, and change within a physical anthropology framework.</td>
</tr>
<tr>
<td>3353</td>
<td>Anthropology of American Culture</td>
<td>(3-0) 3 hours</td>
<td>Presents anthropological approaches to the modern and postmodern United States. Case studies in social structure, language, and ideology are examined. Attention is given to the extent and limits of cultural variation and to cultures both in and outside the mainstream.</td>
</tr>
</tbody>
</table>
3363 Indians of Mesoamerica
(3-0) 3 hours credit. Prerequisite: ANT 1013 or ANT 2053 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.

3383 Folklore and Folklife
(3-0) 3 hours credit. Prerequisite: ANT 1013 or ANT 2053 recommended.
Examines vernacular arts, crafts, and customs and their function in the maintenance of group identity. National, regional, ethnic, and occupational traditions are investigated. Attention is given to texts such as legends, myths, and ballads, as well as folk performance, clothing, architecture, and foodways.

3403,6 Field Course in Archaeology
3 or 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, and interpretation. Additional fees are required. May be repeated for credit with advisor’s permission, but not more than 6 semester credit hours may be applied to a major in anthropology.

3413 The Fieldwork Experience
(3-0) 3 hours credit. Prerequisite: ANT 2023, ANT 2053, or consent of instructor.
Drawing upon the field experiences of major figures in anthropology, the course explores the scientific and humanistic aspects of research in cultural anthropology. Ethnographic methods and techniques are discussed, with emphasis on participant observation and ethical considerations.

3503 Human Origins
(3-0) 3 hours credit. Prerequisite: ANT 1013 or ANT 2033 recommended.
The fossil record of human emergence and 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 ANT 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.

3523 Medical Anthropology
(3-0) 3 hours credit. Prerequisite: ANT 1013, ANT 2033, or ANT 2053 recommended.
This course approaches the study of health and disease patterns in human populations through the combined perspectives of culture, biology, and ecology.

3603 Sex, Gender, and Culture
(3-0) 3 hours credit. Prerequisite: ANT 1013 or ANT 2033 recommended.
Examination of the biological and cultural sources of differences between men and women.

3633 Mexico: Transforming Cultures
(3-0) 3 hours credit. Prerequisite: ANT 1013 or ANT 2053 recommended.
Contemporary issues facing Mexico’s diverse peoples. Emphasis is placed on ethnicity, gender, and class in a globalizing economy. Case studies examine Mexico’s “Indian problem,” the peasantry, urban squatter settlements, women in maquiladoras, and the contested United States-Mexico border.

3663 Hunters and Gatherers
(3-0) 3 hours credit. Prerequisite: ANT 1013, ANT 2043, or ANT 2053 recommended.
The study of lifeways of hunting and gathering peoples around the world. Emphasis is placed on archaeological approaches to past hunting and gathering societies. Cross-cultural analyses utilizing ethnographic and archaeological data within an ecological context are emphasized.
3673  **Ancient Civilizations of the Near East, Egypt, and Europe**  
(3-0) 3 hours credit. Prerequisite: ANT 1013 or ANT 2043 recommended.  
Development of agriculture and village life; beginnings of civilization in the Near East and Mediterranean as compared with Mesoamerica, India, and China; rise of civilization in the Nile Valley.

3683  **Archaeology of the Biblical Lands**  
(3-0) 3 hours credit. Prerequisite: ANT 1013 or ANT 2043 recommended.  
Survey of the prehistoric and early historic periods of the geographic area mentioned in biblical and related texts. Time periods covered are approximately 7,000 B.C. to A.D. 100, or from the Aceramic Neolithic to the Late Iron Age, with emphasis on the later periods. Cultural evolution and culture history, as well as the historicity of textual materials, will be treated.

3713  **Material Culture Systems**  
(3-0) 3 hours credit. Prerequisite: ANT 2043 required and ANT 2053 recommended.  
This course surveys the role of material culture in human social systems of the past and present. Archaeological, historical, and ethnographic case studies are used to illustrate how the material world is variously woven into the fabric of culture.

3723  **Ancient Complex Society**  
(3-0) 3 hours credit. Prerequisites: ANT 2043 required and ANT 3273 or ANT 3673 recommended.  
Cross-cultural exploration of social, economic, and political institutions found in ancient complex societies. Archaeological evidence is used to examine sources of variation in the development and organization of complexity. Comparisons are drawn from the ancient civilizations of South America, Mesoamerica, Africa, and Asia.

3733  **Political and Legal Anthropology**  
(3-0) 3 hours credit. Prerequisite: ANT 1013 or ANT 2053 recommended.  
Comparative political and legal systems; forms of authority, legitimacy, and power. Major trends in anthropological thought are explored with emphasis on the political uses of myth, symbol, and ritual. Law and judicial processes are examined in Western and non-Western societies.

3813  **Anthropology of Business**  
(3-0) 3 hours credit. Prerequisite: ANT 1013 or ANT 2053 recommended.  
This course examines how anthropological concepts and methods are used to understand and improve work conditions, corporate culture, and marketing; and how businesses can be better integrated into global markets by understanding the cultures of international business partners.

3823  **Applied Anthropology**  
(3-0) 3 hours credit. Prerequisite: ANT 1013 or ANT 2053 recommended.  
Applied cultural anthropology directly addresses the needs and problems of communities and organizations throughout the world. Topics include the history of applied anthropology; a conceptual framework for understanding the different styles of applied research; methods of applied anthropology; domains of applied anthropology; international development, medicine, education, business, criminal justice, and the environment; career options and becoming a professional.

3833  **Indians of Texas**  
(3-0) 3 hours credit. Prerequisite: ANT 1013 or ANT 2053 recommended.  
Ethnological survey of the Indian populations of Texas from the early historic period to the present. (Formerly ANT 4133. Credit cannot be earned for both ANT 3833 and ANT 4133.)

3843  **Introduction to Primate Diversity**  
(3-0) 3 hours credit.  
This course offers a broad survey of the social behavior and ecology of the living primates. It begins with a survey of primate taxonomy, drawing distinctions among prosimians, monkeys, and apes. The course concludes with consideration of what the study of non-human primates can tell us about human evolution.
3853 Modern Ape Behavior and Ecology
(3-0) 3 hours credit.
Modern apes show considerable diversity in their behavioral and morphological adaptations. This course will focus on the major theoretical approaches to understanding the biological variation within this primate group. The question of whether great apes exhibit culture will also be discussed.

3863 The Evolution of Human Nature
(3-0) 3 hours credit.
A central concept in the evolution of human behavior is the idea that our brains, like our bodies, have been shaped by natural selection. The extent to which this factor influences the diverse behavior of modern humans is a topic of considerable debate. This course will take a critical look at different attempts to explain human behavior based on adaptive design.

3873 Food, Culture, and Society
(3-0) 3 hours credit.
This course explores the relationship between food and culture in diverse societies throughout the world. By examining food, food practices, and the meanings associated with food we can better understand how people live, how they define themselves in terms of ethnicity, gender, or class, and how they think of themselves relative to nature. Topics include the variation of food habits and meanings across cultures, food and gender roles, eating disorders in Western societies, and the global food system and world hunger.

4113 Archaeology of Texas
(3-0) 3 hours credit. Prerequisite: ANT 2043, ANT 3263, or ANT 3663 recommended.
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.

4123 Archaeology of the American Southwest
(3-0) 3 hours credit. Prerequisite: ANT 2043 or ANT 3263 recommended.
Consideration of the prehistoric cultures in the American Southwest and northern Mexico from the earliest occupations to European contact. Paleo-Indian, Archaic, Mogollon, Anasazi, and Hohokam occupations are reviewed with a consideration of recent research directions and theory.

4243 Ethnographic Film
(3-0) 3 hours credit. Prerequisite: ANT 1013 or ANT 2053 recommended.
Critique of major ethnographic films, concentrating on field methodology, production values, and the issue of representation.

4263 Social and Cultural Change
(3-0) 3 hours credit. Prerequisite: ANT 1013 or ANT 2053 recommended.
Anthropological perspectives on the nature, causes, and consequences of social and cultural change, with an emphasis on how local cultures are shaped by and resist the process of globalization.

4403 Laboratory Analysis in Anthropology
(0-6) 3 hours credit. Prerequisites: ANT 3403 or ANT 3406, and completion of the Core Curriculum requirement in science.
Supervised analysis of field data; methods of analysis; research techniques; and preparation of reports. May be repeated for an additional 3 semester credit hours with consent of instructor.

4911-3 Independent Study
1-3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the Department Chair 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 semester credit 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.
Supervised experience relevant to anthropology within selected community organizations. A maximum of 6 semester credit hours may be earned through Internship in Anthropology. Must be taken on a credit/no credit basis.

4953 Special Studies in Anthropology
(3-0) 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 may be repeated for credit when the topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4983 Anthropology Honors Research
3 hours credit. Prerequisite: Enrollment limited to candidates for Departmental Honors during their last two semesters; approval of the Department faculty.
Supervised individual research and preparation of a major paper in support of Departmental Honors. May be repeated once with advisor’s approval.

4993 Honors Thesis
3 hours credit. Prerequisites: Enrollment limited to candidates for University Honors in Anthropology during their last two semesters; and consent of the Honors College.
Supervised research and preparation of an honors thesis. May be repeated once with advisor’s approval.
DEPARTMENT OF ART AND ART HISTORY

Bachelor of Fine Arts Degree in Art

The Bachelor of Fine Arts (B.F.A.) degree program in Art is awarded in recognition of successful completion of prolonged and intensive studio coursework with supportive studies in art history and criticism. The final two years of study include a specialization in one of the following areas: ceramics, drawing, painting, photography, printmaking, or sculpture. The University is an accredited institutional member of the National Association of Schools of Art and Design.

Transfer students with upper-division art courses on their transcripts should present a portfolio of work to the advisor of record for art programs before the registration period. This portfolio should consist of 10 original examples or 2” x 2” slides of work from upper-division studio courses taken at other institutions.

Applicants seeking a program of study with emphasis on art history and criticism and preparation for possible graduate work in art history should refer to the Bachelor of Arts degree in Humanities.

Most students will fulfill the requirements for this degree with 126 to 129 semester credit hours, including 42 hours of Core Curriculum requirements. Three of the Core Curriculum requirements may also count as part of the 87 required semester credit hours in the art major. Due to the large number of major courses in the B.F.A. degree, full-time art students should enroll in two studio art courses, one art history and criticism course, and one or two Core Curriculum courses each semester. Art majors should request an appointment with the advisor of record for art programs before all enrollment periods. In order to complete all B.F.A. degree requirements in a timely fashion, both full-time and part-time art students should register every term for twice as many credits in their major course requirements as in Core Curriculum courses. Students seeking teacher certification should consult the College of Education and Human Development Office of Teacher Advising and Certification Center.

All candidates for the degree must complete 69 semester credit hours of art (ART) and 18 semester credit hours of art history and criticism (AHC).

Core Curriculum requirements: Students seeking the Bachelor of Fine Arts degree in Art must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | **Mathematics** (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
**Science** (6 semester credit hours)  
Three hours from Level One and three hours from Level Two will satisfy this core requirement. |
Major Requirements

A. 39 semester credit hours of specifically required lower-division studio art and art history foundation courses completed as part of the first 60 hours of the curriculum:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1003</td>
<td>Design: Two Dimensional</td>
</tr>
<tr>
<td>ART 1013</td>
<td>Design: Three Dimensional</td>
</tr>
<tr>
<td>AHC 1113</td>
<td>Survey of Art and Architecture from Prehistoric Times to 1350</td>
</tr>
<tr>
<td>AHC 1123</td>
<td>Survey of Art and Architecture in Europe and the New World from 1350 to 1730</td>
</tr>
<tr>
<td>AHC 1133</td>
<td>Survey of Modern Art</td>
</tr>
<tr>
<td>ART 1213</td>
<td>Drawing I</td>
</tr>
<tr>
<td>ART 1223</td>
<td>Drawing II</td>
</tr>
<tr>
<td>ART 2113</td>
<td>Painting: Basic</td>
</tr>
<tr>
<td>ART 2213</td>
<td>Drawing: Figure</td>
</tr>
<tr>
<td>ART 2413</td>
<td>Printmaking: Basic</td>
</tr>
<tr>
<td>ART 2513</td>
<td>Photography: Basic</td>
</tr>
<tr>
<td>ART 2613</td>
<td>Sculpture: Basic</td>
</tr>
<tr>
<td>ART 2713</td>
<td>Ceramics: Basic</td>
</tr>
</tbody>
</table>

B. 21 semester credit hours of upper-division art courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 3033</td>
<td>Contemporary Studio</td>
</tr>
<tr>
<td>ART 4983</td>
<td>Senior Seminar and Exhibition</td>
</tr>
</tbody>
</table>

15 semester credit hours in one of the following areas: ceramics, drawing, painting, photography, printmaking, or sculpture
C. 9 additional semester credit hours of art history and criticism courses:

   AHC 4113 Contemporary Art
6 elective hours of art history and criticism courses

Students may substitute a specific course in the philosophy of art or a humanities course with a strong art history component for an upper-division art history course with consent of the advisor of record for art programs.

D. 18 additional semester credit hours of art course electives are required, at least 9 of which must be upper-division.

COURSE DESCRIPTIONS

ART

(ART)

NOTE: Due to the instructional format of studio/laboratory classes, auditors will not be approved for art courses.

1003 Design: Two Dimensional
(0-6) 3 hours credit.
Exploration of the visual structure and organization of two-dimensional surfaces using a variety of media, with an emphasis on the development of creative and critical skills. [TCCN: ARTS 1311.]

1013 Design: Three Dimensional
(0-6) 3 hours credit.
Exploration of the visual structure and organization of multidimensional forms in a variety of materials, with an emphasis on the development of creative and critical skills. [TCCN: ARTS 1312.]

1153 Painting for Non-Art Majors
(0-6) 3 hours credit.
An introduction to the fundamentals of painting. May not be applied to a major in art.

1163 Drawing for Non-Art Majors
(0-6) 3 hours credit.
An introduction to the fundamentals of drawing. May not be applied to a major 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 adjustable 35mm cameras. May not be applied to a major 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. [TCCN: ARTS 1316.]

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. [TCCN: ARTS 1317.]

2113 Painting: Basic
(0-6) 3 hours credit. Prerequisites: ART 1003, and 1223.
Instruction in basic painting concepts, skills, and materials with an emphasis on the use of oil paint and oil mediums. [TCCN: ARTS 2316.]
2213  **Drawing: Figure**  
(0-6) 3 hours credit. Prerequisite: ART 1223.  
Study of the human figure and its anatomical and structural dynamics. May be repeated for credit. [TCCN: ARTS 2323.]

2313  **Digital Imaging: Basic**  
(0-6) 3 hours credit.  
Introduction to the fundamentals of 2D image creation and manipulation using Adobe Photoshop and Fractal Design Painter. Students use software as a tool for making art that can be executed in a variety of media, including printmaking, photography, video, and multimedia computer display programs. Previous computer experience helpful but not required.

2413  **Printmaking: Basic**  
(0-6) 3 hours credit. Prerequisites: ART 1003, and 1223.  
Introduction to printmaking processes, concepts, and materials. [TCCN: ARTS 2333.]

2513  **Photography: Basic**  
(0-6) 3 hours credit. Prerequisite: ART 1003.  
Introduction to photographic image making, technical principles, and laboratory procedures. Students are expected to provide their own adjustable 35mm cameras. [TCCN: ARTS 2356.]

2613  **Sculpture: Basic**  
(0-6) 3 hours credit. Prerequisites: ART 1003, and ART 1013  
Instruction in basic sculptural concepts and materials. [TCCN: ARTS 2326.]

2713  **Ceramics: Basic**  
(0-6) 3 hours credit. Prerequisites: ART 1003 and 1013.  
Instruction in basic ceramic concepts and techniques. [TCCN: ARTS 2346.]

3033  **Contemporary Studio: Concepts and Practice**  
(0-6) 3 hours credit. Prerequisites: Satisfactory completion of 9 hours of any three 2000-level art courses, and 6 hours of AHC courses.  
Interdisciplinary studio projects generated from lectures, readings, and discussion, focusing on critical and cultural issues from the 1970s to the present. Projects are intended to encourage collaborative efforts and nontraditional solutions. Required of all B.F.A. candidates.

3113  **Painting: Intermediate**  
(0-6) 3 hours credit. Prerequisite: ART 2113.  
Continued study of the methods and materials of painting connecting color, form, and composition to image and idea development. This course emphasizes the use of oil paint and oil mediums. May be repeated for credit.

4033  **Studio Art Problems**  
(0-6) 3 hours credit. Prerequisite: Satisfactory completion of any two 2000-level art courses.  
An advanced exploration of visual art ideas and problems that encourage individual creative direction in the use of various studio materials and processes. May be repeated for credit.

4133  **Painting: Advanced**  
(0-6) 3 hours credit. Prerequisite: 6 semester credit hours in ART 3113.  
Concentration on the development of a personal vision and an individual approach with consideration of historical and contemporary issues in painting. Occasionally this course may focus on a special topic such as the figure, abstraction, and landscape. May be repeated for credit.

4233  **Drawing**  
(0-6) 3 hours credit. Prerequisite: ART 2213.  
An emphasis on the development of a personal vision and individual approach to the use of the medium. May be repeated for credit.
4333 Digital Imaging: Advanced
(0-6) 3 hours credit. Prerequisite: ART 2313.
Fundamentals of three-dimensional modeling and basic animation and its integration with advanced concepts in two-dimensional image manipulation programs and multimedia displays. Students will be encouraged to use computer tools experimentally to create art which amplifies and extends image making beyond traditional techniques. May be repeated for credit.

4433 Printmaking
(0-6) 3 hours credit. Prerequisite: ART 2413.
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: ART 2513.
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.
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.
An emphasis on the development of a personal vision and individual approach to the use of the medium. May be repeated for credit.

4833 Practicum in the Visual Arts
3 hours credit. Prerequisite: Permission in writing (departmental form available).
Students will participate in projects on an individual basis. The practical application of art methods and principles in such projects as providing special art programs or exhibition assistance to organizations and providing technical studio assistance for artists. Students must confer with instructor during the semester prior to enrolling in order to formulate the content of the practicum. May be repeated for credit.

4913 Independent Study
3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student’s advisor, the Department Chair, 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4953 Special Studies in Art
(0-6) 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 may be repeated for credit when topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4983 Senior Seminar and Exhibition
(0-6) 3 hours credit. Prerequisites: ART 3033, and must have completed application for graduation.
This course prepares the student in the professional concerns of aesthetics, art practices, and exhibition. The student will prepare work for a group exhibition in consultation with both the class instructor and a faculty advisor from his or her studio area of specialization. (Formerly ART 4903 and ART 4933. Students who completed both ART 4903 and ART 4933 cannot earn credit for ART 4983.)
Minor in Art History and Criticism

The discipline of the history of art addresses cultural, historical, and critical issues through the visual arts. A Minor in Art History and Criticism provides students with a general overview of the discipline.

All students pursuing the Minor in Art History and Criticism must complete 18 semester credit hours.

A. 6 semester credit hours selected from the following:
   - AHC 1113 Survey of Art and Architecture from Prehistoric Times to 1350
   - AHC 1123 Survey of Art and Architecture in Europe and the New World from 1350 to 1750
   - AHC 1133 Survey of Modern Art

B. 12 semester credit hours selected from the following:
   - AHC 3123 Northern European Art: Fifteenth and Sixteenth Centuries
   - AHC 3423 Pre-Columbian Art and Architecture of Mesoamerica
   - AHC 4113 Contemporary Art
   - AHC 4333 Topics in Art History and Criticism (repeatable for credit)
   - AHC 4933 Art Gallery and Museum Internship

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 Europe (1425-1825), ancient Mexico and Guatemala (before 1521), and modern Mexico (1920-1940). [TCCN: ARTS 1301.]

1113 Survey of Art and Architecture from Prehistoric Times to 1350
(3-0) 3 hours credit.
A study of art and architecture as it developed from Paleolithic times to 1350 in the various civilizations of Europe, the Near East, and the New World. Course will include selected readings from related fields. [TCCN: ARTS 1303.]

1123 Survey of Art and Architecture in Europe and the New World from 1350 to 1750
(3-0) 3 hours credit.
A study of art and architecture as it developed from the period of the Aztecs and Incas in the New World and the Renaissance in Europe to 1750. Course will include selected readings from related fields.

1133 Survey of Modern Art
(3-0) 3 hours credit.
A study of modern art from the French Revolution to the present, with special emphasis on contemporary developments. Course will include selected readings from related fields.

3123 Northern European Art: Fifteenth and Sixteenth Centuries
(3-0) 3 hours credit. Prerequisite: 3 semester credit hours of lower-division art history
A study of the fifteenth- and sixteenth-century art of Northern Europe. Emphasis is placed on the development of the arts in Flanders and Germany.

3423 Pre-Columbian Art and Architecture of Mesoamerica
(3-0) 3 hours credit. Prerequisite: 3 semester credit hours of lower-division art history.
A study of art and architecture in ancient Guatemala, Mexico, Belize, and Honduras.
4113  Contemporary Art  
(3-0) 3 hours credit. Prerequisite: 3 semester credit hours of lower-division art history.  
Contemporary developments in the visual arts of the United States and Europe from 1960 to the present.

4333  Topics in Art History and Criticism  
(3-0) 3 hours credit. Prerequisite: 3 semester credit hours of lower-division art history.  
Focus on a specific period, medium, or theoretical and critical issue within the history and criticism of art. May be repeated for credit when topics vary.

4933  Art Gallery and Museum Internship  
3 hours credit. Prerequisite: Permission in writing (departmental form available).  
Supervised experience related to preparation and installation of exhibitions in gallery and museum settings. Students must confer with instructor during the semester prior to enrolling in order to formulate the content of the internship.
DEPARTMENT OF COMMUNICATION

The Department of Communication offers a Bachelor of Arts degree and a minor in Communication. Honors may also be earned in Communication. If a student majors in Communication, he or she has the option of concentrating his or her coursework in one of the following areas: Speech Communication, Technical Communication, Electronic Media, or Public Relations. Students interested in preparing for careers in the news media should concentrate in Technical Communication, and use their Communication and free electives to complete a recommended curriculum available from the advisor.

DEPARTMENT HONORS

Students whose grade point average in the communication major (including support work) before the beginning of their final year at UTSA is 3.25 or above, and whose overall grade point average is 3.0, may earn Honors in Communication. In order to do so, a student must complete a substantial paper or project approved by the Department Honors Committee, and maintain a 3.25 grade point average in both the major and support work. The grade point average requirements apply to all transfer work and courses at UTSA. In the event that a student does not meet the minimum grade point average requirements, the student may appeal to the Department Honors Committee for special consideration. Appropriate forms and letter(s) of recommendation from UTSA faculty are necessary for such consideration.

Bachelor of Arts Degree in Communication

The Bachelor of Arts degree in Communication offers four areas of concentration: speech communication, technical communication, electronic media, and public relations. The minimum number of semester credit hours required for this degree is 120, including Core Curriculum requirement hours. Thirty-nine of the 120 total semester credit hours required for the degree must be at the upper-division level.

Speech Communication Concentration

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Arts degree in Communication with a Speech Communication Concentration must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
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</tr>
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</table>
| Rhetoric (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| Domain I: Mathematics and Science | Mathematics (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
Science (6 semester credit hours)  
Three hours from Level One and three hours from Level Two will satisfy this core requirement. |
Degree Requirements

A. 30 semester credit hours of required coursework:

1. Common Communication degree requirements

   ENG 2413  Technical Writing
   COM 2213  Foundations of Communication
   COM 2733  Introduction to Communication Technologies
   COM 3073  Conduct of Communication Inquiry
   COM 3083  Language and Communication Theory
   COM 3553  Intercultural Communication
   or
   COM 3563  International Communication

2. Other required courses:

   COM 2113  Public Speaking
   COM 3243  Persuasion
   COM 3253  Rhetorical Communication Analysis
   COM 3383  Interpersonal Communication

B. 9 additional semester credit hours in Communication at the upper-division level

C. 6 semester credit hours in a single language other than English
D. 15 semester credit hours of approved support work in one of the following areas, 12 of which must be at the upper-
   division level:

1. Intercultural/international studies
2. English language and composition, philosophy, and visual arts
3. Social and behavioral sciences
4. Business, management, marketing, and information systems
5. Other subjects as may be individually justified by the student and approved by the undergraduate advisor

E. 18 semester credit hours of free electives

**Technical Communication Concentration**

Students interested in preparing for careers in the news media should use their Communication and free electives to
complete a recommended curriculum available from the advisor. All candidates seeking this degree must fulfill the Core
Curriculum requirements and the degree requirements, which are listed below.

**Core Curriculum requirements:** Students seeking the Bachelor of Arts degree in Communication with a Technical
Communication Concentration must fulfill University Core Curriculum requirements in the same manner as other
students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements;
however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order
to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that
satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

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<td><strong>Domain I: Mathematics and Science</strong></td>
<td>Mathematics (3 semester credit hours)</td>
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<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<td><strong>Domain I: Mathematics and Science</strong></td>
<td>Science (6 semester credit hours)</td>
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<td>Three hours from Level One and three hours from Level Two will satisfy this core requirement.</td>
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<td><strong>Domain II: Society and Culture</strong></td>
<td>United States History and Diversity (6 semester credit hours)</td>
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<td>Any six hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<td><strong>Domain II: Society and Culture</strong></td>
<td>Political Studies (6 semester credit hours)</td>
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<td>POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<td><strong>Domain II: Society and Culture</strong></td>
<td>Social and Behavioral Sciences (3 semester credit hours)</td>
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<td>Economics (3 semester credit hours)</td>
</tr>
<tr>
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<td>ECO 2023 Introductory Microeconomics</td>
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Degree Requirements

A. 30 semester credit hours of required coursework:

1. Common Communication degree requirements:

   - ENG 2413  Technical Writing
   - COM 2213  Foundations of Communication
   - COM 2733  Introduction to Communication Technologies
   - COM 3073  Conduct of Communication Inquiry
   - COM 3083  Language and Communication Theory
   - COM 3553  Intercultural Communication
   - or
   - COM 3563  International Communication

2. Other required courses:

   - COM 2433  Editing
   - COM 3413  Writing for New Media
   - COM 3623  Commercial Publications
   - COM 3633  Professional Presentation

B. 9 additional semester credit hours in Communication at the upper-division level

C. 6 semester credit hours in a single foreign language

D. 15 semester credit hours of support work:

1. ACC 2013  Principles of Accounting I
   ECO 2023  Introductory Microeconomics
   FIN 3003  Survey of Finance

2. 6 semester credit hours of approved support work in one of the following areas, at the upper-division level:

   - Intercultural/international studies
   - English language and composition, philosophy, and visual arts
   - Social and behavioral sciences
   - Business, management, marketing, and information systems
   - Other subjects as may be individually justified by the student and approved by the undergraduate advisor

E. 18 semester credit hours of free electives, 3 of which must be at the upper-division level
Electronic Media Concentration

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Arts degree in Communication with an Electronic Media Concentration must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

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<th>Core Curriculum Requirements</th>
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| Rhetoric (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| Domain I: Mathematics and Science | Mathematics (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
Science (6 semester credit hours)  
Three hours from Level One and three hours from Level Two will satisfy this core requirement. |
| Domain II: Society and Culture | United States History and Diversity (6 semester credit hours)  
Any six hours listed under this section in the list of core courses will satisfy this core requirement.  
Political Studies (6 semester credit hours)  
POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.  
Social and Behavioral Sciences (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
Economics (3 semester credit hours)  
ECO 2023 Introductory Microeconomics |
| Domain III: Literature and the Arts | Literature (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
The Arts (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
| Domain IV: Interdisciplinary Studies | (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
Note: If a language is used to satisfy this three-hour requirement, students will need to take an additional three hours in the same language for the degree requirement. |
Degree Requirements

A. 30 semester credit hours of required coursework:

1. Common Communication degree requirements:
   
   ENG 2413  Technical Writing
   COM 2213  Foundations of Communication
   COM 2733  Introduction to Communication Technologies
   COM 3073  Conduct of Communication Inquiry
   COM 3083  Language and Communication Theory
   COM 3553  Intercultural Communication
   or
   COM 3563  International Communication

2. Other required courses:
   
   COM 3633  Professional Presentation
   COM 3733  Fundamentals of Communications Media
   COM 3893  Organizational Communication
   COM 4733  Communications Design and Innovation

B. 9 additional semester credit hours in Communication, at least 6 of which must be at the upper-division level

C. 6 semester credit hours in a single foreign language

D. 15 semester credit hours of support work:

1. ACC 2013  Principles of Accounting I
   ECO 2023  Introductory Microeconomics
   FIN 3003  Survey of Finance

2. 6 semester credit hours of approved support work in one of the following areas, at the upper-division level:
   
   a. Intercultural/International studies
   b. English language and composition, philosophy, and visual arts
   c. Social and behavioral sciences
   d. Business, management, marketing, and information systems
   e. Other subjects as may be individually justified by the student and approved by the undergraduate advisor

E. 18 semester credit hours of free electives

Public Relations Concentration

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Arts degree in Communication with a Public Relations Concentration must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.
### Core Curriculum Requirements

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<td>ENG 1013 Freshman Composition</td>
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<td><strong>Mathematics (3 semester credit hours)</strong></td>
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<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<tr>
<td></td>
<td><strong>Science (6 semester credit hours)</strong></td>
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<td>Three hours from Level One and three hours from Level Two will satisfy this core requirement.</td>
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<td><strong>Domain II: Society and Culture</strong></td>
<td><strong>United States History and Diversity (6 semester credit hours)</strong></td>
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<td>Any six hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<td><strong>Political Studies (6 semester credit hours)</strong></td>
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<td>POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<td><strong>Social and Behavioral Sciences (3 semester credit hours)</strong></td>
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<td><strong>Domain III: Literature and the Arts</strong></td>
<td><strong>Literature (3 semester credit hours)</strong></td>
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<td><strong>The Arts (3 semester credit hours)</strong></td>
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<td><strong>Domain IV: Interdisciplinary Studies</strong></td>
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<td>Note: If a language is used to satisfy this three-hour requirement, students will need to take an additional three hours in the same language for the degree requirement.</td>
</tr>
</tbody>
</table>

### Degree Requirements

A. 33 semester credit hours of required coursework:

1. Common Communication degree requirements

   ENG 2413 Technical Writing
   COM 2213 Foundations of Communication
   COM 2733 Introduction to Communication Technologies
   COM 3073 Conduct of Communication Inquiry
   COM 3083 Language and Communication Theory

   COM 3553 Intercultural Communication  
   or
   COM 3563 International Communication

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2. Other required courses:

- COM 3513 Writing for Public Relations
- COM 3523 Public Relations
- COM 3893 Organizational Communication
- COM 4523 Case Studies in Public Relations
- COM 4533 Public Relations Planning and Campaigns

B. 9 additional semester credit hours in Communication, at least 6 of which must be at the upper-division level

C. 6 semester credit hours in a single foreign language

D. 15 semester credit hours of support work:

1. ACC 2013 Principles of Accounting I
   ECO 2023 Introductory Microeconomics
   FIN 3003 Survey of Finance

2. 6 semester credit hours of approved support work in one of the following areas, at the upper-division level:

   a. Intercultural/international studies
   b. English language and composition, philosophy, and visual arts
   c. Social and behavioral sciences
   d. Business, management, marketing, and information systems
   e. Other subjects as may be individually justified by the student and approved by the undergraduate advisor

E. 15 semester credit hours of free electives

**Minor in Communication**

All students pursuing the Minor in Communication must complete 21 semester credit hours.

A. 12 semester credit hours of required courses:

- ENG 2413 Technical Writing
- COM 2213 Foundations of Communication
- COM 3073 Conduct of Communication Inquiry
- COM 3083 Language and Communication Theory

B. One of the following options:

1. General Communication Emphasis: 9 additional semester credit hours of communication, at least 6 of which must be upper-division

2. Writing Emphasis: 9 additional hours selected from:

   - COM 2433 Editing
   - COM 3413 Writing for New Media
   - COM 3513 Writing for Public Relations
   - ENG 3413 Specialized Professional Writing
COURSE DESCRIPTIONS
COMMUNICATION
(COM)

1001 Freshman Topics in Communication
(1-1) 1 hour credit.
Required for entering freshmen in the College of Liberal and Fine Arts with less than 15 hours of coursework and who are interested in majoring in Communication. Critical study of topics in Communication. Innovative classroom and learning techniques are used to introduce students to these topics and to help strengthen critical thinking, problem solving, and writing skills. Enrichment activities may include film, television programs, web resources, field trips, and guest lectures by other faculty. Content varies with each instructor. A maximum of 3 semester credit hours of freshman topics courses may apply to a bachelor’s degree, although this specific topic may be taken only once.

1043 Introduction to Communication
(3-0) 3 hours credit. Prerequisite: ENG 1013.
Introduction to the fundamental processes of human communication, with emphasis on interpersonal, group, and mass communication. Emphasis is given to those skills that promote oral proficiency. [TCCN: SPCH 1311.]

1053 Business and Professional Speech
(3-0) 3 hours credit. Prerequisite: ENG 1013.
Examination of the basic communication process through oral channels with practical applications for business. Emphasis is on techniques of business and professional presentation, including components of message strategies, nonverbal communication, multimedia support, and persuasive speaking. Oral presentations with written components required. [TCCN SPCH 1321.]

2113 Public Speaking
(3-0) 3 hours credit. Prerequisite: COM 1043 or COM 1053 or consent of instructor.

2123 Oral Interpretation
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.
Study of verbal and nonverbal communication, especially for aesthetic purposes, and of the dramaturgical skills that relate to the performing arts. Emphasis is given to those skills that promote oral proficiency. [TCCN: SPCH 2341.]

2213 Foundations of Communication
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.
Introduction to fundamental concepts in Speech Communication, Technical Communication, Electronic Media, and Public Relations. Addresses basic strategies and technologies used for information access, retrieval, and processing. Required of and restricted to students majoring or minoring in Communication.

2343 Introduction to Mass Communication
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.
Critical examination of how the mass media interact with individuals and social groups. Exploration of media industries, products, and processes from various disciplinary perspectives. Comparative analysis of media products from different cultural and national contexts. [TCCN: COMM 1307.]

2433 Editing
(3-0) 3 hours credit. Prerequisite: ENG 2413.
Principles and applications of production editing and technical editing, including evaluation and revision of style, tone, and organization of documents. Practice in use of editing symbols and copy marking. (Same as ENG 2433. Credit cannot be earned for both COM 2433 and ENG 2433.)
2733  Introduction to Communication Technologies  
(3-0) 3 hours credit. Prerequisite: Completion of the Core Curriculum rhetoric requirement. 
Overview of media and networks used for entertainment and information distribution, storage, and retrieval. 
Emphasis on the interrelationships among technology, economics, policy, society, and culture.

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. [TCCN: SPCH 2144.]

3073  Conduct of Communication Inquiry  
(3-0) 3 hours credit. Prerequisite: Completion of or concurrent enrollment in COM 2213. 
Introduction to basic research methods as they apply to communication inquiry. Issues include applications of 
quantitative and qualitative research designs, descriptive and inferential statistics, and interpretation and critical 
evaluation of findings.

3083  Language and Communication Theory  
(3-0) 3 hours credit. Prerequisite: Completion of or concurrent enrollment in COM 2213. 
Overview of theories of language and communication. Focuses on understanding how language and 
communication affect individual and social action.

3113  Argumentation and Debate  
(3-0) 3 hours credit. Prerequisites: COM 1043, COM 1053, or COM 2213. 
Offers the opportunity to train in the preparation, construction, and critical analysis of argumentation. Exercises 
in oral communication in adversarial situations.

3243  Persuasion  
(3-0) 3 hours credit. Prerequisite: COM 3073 and COM 3083. 
Theory and practice of influencing attitudes, beliefs, opinions, and actions. Emphasis on critical evaluation of 
persuasive messages and design of persuasive campaigns.

3253  Rhetorical Communication Analysis  
(3-0) 3 hours credit. Prerequisite: COM 2113 or consent of instructor. 
Study of classical and contemporary rhetorical theory. Critical evaluation of communication messages and 
techniques of delivery.

3343  Theories of Mass Communication  
(3-0) 3 hours credit. Prerequisite: COM 2343. 
Overview of theories of mass communication. Includes exploration of the processes and effects of the media in 
public entertainment and information programming.

3383  Interpersonal Communication  
(3-0) 3 hours credit. Prerequisite: COM 1043, COM 1053, or COM 2213. 
Theory and research of communication in personal and professional settings. The course stresses the social 
context of communication and emphasizes skills, knowledge, and motivation of verbal and nonverbal 
interaction. (Same as MGT 3253. Credit cannot be earned for both COM 3383 and MGT 3253.)

3413  Writing for New Media  
(3-0) 3 hours credit. Prerequisite: ENG 2413. 
Introduction to issues and practices in the design of on-line information. Emphasis on writing and design 
practices in the context of various on-line information genres, including writing for the World Wide Web. Other 
topics may include hypertext theory and interactive design.
3513  **Writing for Public Relations**  
(3-0) 3 hours credit. Prerequisites: COM 3523 and ENG 2413.  
Exposure to techniques and skills associated with writing for public relations to create internal and external documents, such as news releases, reports, newsletters, feature stories, and brochures. Designed to enable students to become competent and versatile writers for a variety of publics.

3523  **Public Relations**  
(3-0) 3 hours credit. Prerequisite: Completion of or concurrent enrollment in COM 2213.  
Introduction to principles and practices of public relations, with emphasis on strategies and execution of campaigns. Some attention to public relations within multicultural communities.

3543  **Multicultural Public Communication Practices**  
(3-0) 3 hours credit. Prerequisites: COM 2213 and COM 3553 or COM 3563.  
Strategic planning and execution of public information campaigns targeting ethnic markets; emphasis on techniques of audience analysis, construction of messages, and use of specific communication channels.

3553  **Intercultural Communication**  
(3-0) 3 hours credit. Prerequisite: COM 3083.  
Examination of differences in communication that arise from cultural and/or ethnic diversity. Emphasis on the verbal and nonverbal communicative patterns, conflict management, and decision-making processes of diverse cultures. Credit cannot be earned for both COM 3553 and COM 3573.

3563  **International Communication**  
(3-0) 3 hours credit. Prerequisite: COM 3083.  
Examination of issues, conditions, and processes relating to world media systems. Consideration of theoretical and practical perspectives in key domains of interaction such as political economy, social development, and technology.

3623  **Commercial Publications**  
(3-0) 3 hours credit. Prerequisite: ENG 2413.  
Theory and practice of commercial writing and desktop publishing. Includes discussion of document design, principles of layout, and typography.

3633  **Professional Presentation**  
(3-0) 3 hours credit. Prerequisites: COM 1043 or COM 1053 or COM 2213.  
Fundamentals of professional presentations including information exchange, problem solving, and persuasive proposals. Emphasis on the integration of oral presentation with written, graphic, and other media materials.

3663  **Urban Reporting/Writing**  
(3-0) 3 hours credit. Prerequisite: Consent of instructor.  
News coverage of politics, law, education, social services, and government institutions as they relate to specific urban economics and social problems.

3673  **Multicultural Reporting/Writing**  
(3-0) 3 hours credit. Prerequisite: Consent of instructor.  
Critical examination of diversity and the media. Exposure to journalistic tools for the coverage of diverse ethnic, gender, ability, and ideological groups inside and outside the United States. Discussion of the critical role of diverse voices in a democracy.

3733  **Fundamentals of Communications Media**  
(3-0) 3 hours credit. Prerequisites: COM 2213, COM 2733, and completion of or concurrent enrollment in COM 3073.  
Examination of basic technical concepts and their application to telecommunications technologies, including principles of analog and digital transmission, and integrated networks. Introduction to organizational processes of telecommunications development.
3883  **Small Group Communication**  
(3-0) 3 hours credit. Prerequisites: COM 3073 and completion of or concurrent enrollment in COM 3383.  
Theory and research in the communication processes of small groups. Emphasis on analysis of transactions in social and task-oriented groups.

3893  **Organizational Communication**  
(3-0) 3 hours credit. Prerequisites: COM 1043 or COM 1053 or COM 2213.  
Theory and research in organizational communication. Examination of the barriers to effective organizational communication; group communication and decision making; information flows through the formal and informal networks of organizations, and the means of evaluating organizational communication effectiveness. (Same as MGT 3123. Credit cannot be earned for both COM 3893 and MGT 3123).

4383  **Relational Communication**  
(3-0) 3 hours credit. Prerequisites: COM 3073 and COM 3383.  
Examination of the transactional processes involved in the creation, maintenance, and termination of personal relationships. Analysis of current research and theories concerning the role and effects of communicating in friendship, marriage, and family relationships.

4413  **Topics in Speech Communication**  
(3-0) 3 hours credit. Prerequisite: COM 3083 or consent of instructor.  
Intensive study of one or more specific issues in Speech Communication (including contexts, theoretical perspectives, and research methods). May be repeated once for credit when topics vary.

4423  **Topics in Technical Communication**  
(3-0) 3 hours credit. Prerequisite: COM 3083 or consent of instructor.  
Intensive study of one or more specific issues in Technical Communication (including contexts, theoretical perspectives, research methods, and production processes). May be repeated once for credit when topics vary.

4433  **Topics in Electronic Media**  
(3-0) 3 hours credit. Prerequisite: COM 3083 or consent of instructor.  
Intensive study of one or more specific issues in Electronic Media (including contexts, theoretical perspectives, and individual technologies). May be repeated once for credit when topics vary.

4443  **Topics in Public Relations**  
(3-0) 3 hours credit. Prerequisite: COM 3083 or consent of instructor.  
Intensive study of one or more specific issues in Public Relations (including media relations, special events planning, and use of technologies). May be repeated once for credit when topics vary.

4523  **Case Studies in Public Relations**  
(3-0) 3 hours credit. Prerequisites: COM 3513, COM 3523, and completion of or concurrent enrollment in COM 3073.  
Advanced study of public relations functions, principles, and practices using local, regional, and national organizations as examples.

4533  **Public Relations Planning and Campaigns**  
(3-0) 3 hours credit. Prerequisite: COM 4523.  
Application of public relations principles to the planning and production of messages and campaigns. Students will be expected to produce and carry out a public relations campaign within the community.

4733  **Communications Design and Innovation**  
(3-0) 3 hours credit. Prerequisite: COM 3733.  
Application and design of communications systems for professional organizations. Focus is on formal and informal communication involved in effective implementation and use of technology. Procedures for needs assessment, budgetary analysis, design, implementation, evaluation, and modification of communication technology.
4911-3  **Independent Study in Communication**  
1-3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the Department Chair, 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4933  **Internship in Communication**  
3 hours credit. Prerequisites: COM 2213, junior standing, and consent of instructor. Supervised field experience in Communication. May be repeated once for credit, but only 3 semester credit hours may be counted toward major requirements.

4973  **Seminar for Communication Majors**  
(3-0) 3 hours credit. Prerequisites: 12 upper-division semester credit hours in Communication and consent of instructor. This undergraduate seminar, limited to Communication majors in their final year, offers the opportunity to study practical application of principles and practices of communication. Students are required to engage in critical thinking, strategic planning, and problem-solving activities in implementing a creative program in a social or organizational setting. Content varies with each instructor. May be repeated once for credit when topics vary.

4993  **Honors Thesis**  
3 hours credit. Prerequisite: Enrollment limited to candidates for graduation with University Honors. Supervised research and preparation of an honors thesis. May be repeated once with advisor approval.
DEPARTMENT OF ENGLISH, CLASSICS, AND PHILOSOPHY

The department offers Bachelor of Arts degrees and minors in English, Humanities, Philosophy, and Classical Studies. Honors can also be earned in English, Humanities, Philosophy, and Classical Studies.

Honors in English

Students whose grade point average in the English major (including support work) before the beginning of their final year at UTSA is 3.25 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 Department Scholarship and Honors Committee and maintain a 3.25 grade point average in both the major and support work. The grade point average requirements apply to all transfer work and courses taken at UTSA.

Bachelor of Arts Degree in English

The minimum number of semester credit hours required for this degree is 120, including the hours of Core Curriculum requirements. Thirty-nine of the 120 total semester credit hours required for the degree must be at the upper-division level. Students seeking teacher certification should consult the College of Education and Human Development Advising and Certification Center and for information.

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Arts degree in English must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
  ENG 1013 Freshman Composition  
  ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | **Mathematics** (3 semester credit hours)  
  Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
  **Science** (6 semester credit hours)  
  Three hours from Level One and three hours from Level Two will satisfy this core requirement. |
### Degree Requirements

A. 33 semester credit hours in English, 21 of which must be at the upper-division level:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 2213</td>
<td>Literary Criticism and Analysis</td>
</tr>
<tr>
<td>ENG 2223</td>
<td>Major British Writers I</td>
</tr>
<tr>
<td>ENG 2233</td>
<td>Major British Writers II</td>
</tr>
<tr>
<td>ENG 2263</td>
<td>Major American Writers</td>
</tr>
</tbody>
</table>

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<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>ENG 3223</td>
<td>Shakespeare: The Early Plays</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>ENG 3233</td>
<td>Shakespeare: The Later Plays</td>
</tr>
</tbody>
</table>

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<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 4973</td>
<td>Seminar for English Majors</td>
</tr>
</tbody>
</table>

15 additional upper-division semester credit hours in English, at least 6 hours of which must be in literature; of these 6 hours, at least 3 must include the study of American literature; 3 hours of literature may be used to satisfy the Core Curriculum requirement in Domain IIIA.

6 semester credit hours in a single language other than English

B. 12 additional semester credit hours of approved support work in one of the following categories (at least 6 hours of which must be at the upper-division level), which may also be used to satisfy a Core Curriculum requirement:

1. Classical studies (CLA), philosophy (PHI), humanities (HUM)
2. Foreign languages, foreign literature (including foreign literatures in translation)

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**Domain II: Society and Culture**
- **United States History and Diversity** (6 semester credit hours)
  - Any six hours listed under this section in the list of core courses will satisfy this core requirement.
- **Political Studies** (6 semester credit hours)
  - POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.
- **Social and Behavioral Sciences** (3 semester credit hours)
  - Any three hours listed under this section in the list of core courses will satisfy this core requirement.
- **Economics** (3 semester credit hours)
  - Any three hours listed under this section in the list of core courses will satisfy this core requirement.

**Domain III: Literature and the Arts**
- **Literature** (3 semester credit hours)
  - Any three hours listed under this section in the list of core courses will satisfy this core requirement. However, English majors may fulfill the literature requirement by successfully completing ENG 2213.
- **The Arts** (3 semester credit hours)
  - Any three hours listed under this section in the list of core courses will satisfy this core requirement.

**Domain IV: Interdisciplinary Studies**
- (3 semester credit hours)
  - Any three hours listed under this section in the list of core courses will satisfy this core requirement.
  - Note: If a language is used to satisfy this three-hour requirement, students will need to take an additional three hours in the same language for the degree requirement.
3. Linguistics (including linguistics courses designated ENG, provided that they have not been counted toward the required 30 semester credit hours in English)
4. Communication (COM)
5. Creative writing or expository and technical writing (including courses designated ENG, provided that they have not been counted toward the required 30 semester credit hours in English)
6. American studies (AMS), anthropology (ANT), history (HIS), psychology (PSY), or sociology (SOC)
7. History and theory of either art or music
8. Ethnic studies
9. Women’s studies
10. Other subjects as may be individually justified by the student and approved by the undergraduate advisor

Students who select a support category other than classics, philosophy, or humanities may apply 6 semester credit hours of upper-division literature courses in humanities or classics toward requirement A of the English major.

C. 27 semester credit hours of electives

**Bachelor of Arts degree in English with an Emphasis on Professional Writing**

All candidates for the Bachelor of Arts degree in English with a Professional Writing emphasis must complete:

A. 33 semester credit hours in English, 21 of which must be at the upper-division level:

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
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<td>ENG 2213</td>
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<tr>
<td>ENG 2263</td>
<td>Major American Writers</td>
</tr>
<tr>
<td>ENG 3223</td>
<td>Shakespeare: The Early Plays</td>
</tr>
<tr>
<td>ENG 3233</td>
<td>Shakespeare: The Later Plays</td>
</tr>
<tr>
<td>ENG 3313</td>
<td>Advanced Composition</td>
</tr>
<tr>
<td>ENG 3413</td>
<td>Specialized Professional Writing</td>
</tr>
<tr>
<td>ENG 4933</td>
<td>Internship</td>
</tr>
<tr>
<td>ENG 4973</td>
<td>Seminar for English Majors</td>
</tr>
</tbody>
</table>

6 additional upper-division semester credit hours in English literature; of these 6 hours at least 3 hours must include the study of American literature; 3 hours of literature may be used to satisfy the Core Curriculum requirement in Domain IIIA.

B. 6 semester credit hours in a single language other than English

C. 27 semester credit hours of electives

D. 12 additional semester credit hours of approved support work in professional writing, including the following 9 semester credit hours:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 2413</td>
<td>Technical Writing</td>
</tr>
<tr>
<td>ENG 2433</td>
<td>Editing</td>
</tr>
<tr>
<td>ENG 4433</td>
<td>Advanced Professional Writing</td>
</tr>
</tbody>
</table>
Minor in English Literature

All students pursuing the Minor in English Literature must complete 21 semester credit hours of English and American literature.

A. 15 semester credit hours of required courses:

- ENG 2213 Literary Criticism and Analysis
- 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

B. 6 additional upper-division semester credit hours of literature in English, 3 of which must include the study of American literature

COURSE DESCRIPTIONS

ENGLISH (ENG)

0103 Basic English
(3-0) 3 hours credit.
Offers the opportunity for increasing writing skills before enrollment in ENG 1013. Intensive practice in the writing process, including prewriting, organization, sentence structure, and use of grammar, spelling, and punctuation. Includes library research and documentation, and critical reading of academic writing. 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.
Reviews principles of the writing process and of using sources for writing. Introduces the patterns of development, summary and paraphrase, analysis, evaluation, and synthesis of multiple sources drawn from a variety of cultural and intellectual contexts. Includes attention to forms of oral and visual communication and extensive library research and documentation. (This course or an equivalent is required of all undergraduates in fulfilling the Core Curriculum requirement and is normally taken during the first semester of the freshman year.) [TCCN: ENGL 1301.]

1023 Discourse across the Disciplines
(3-0) 3 hours credit. Prerequisite: ENG 1013.
Extensive writing practice in the use of logical and organizational patterns and introduction to persuasion in written, oral, and visual form. Develops critical and analytical skills through multidisciplinary and multicultural readings. (This course or an equivalent is required of all undergraduates in fulfilling the Core Curriculum requirement and should be taken as the continuation of ENG 1013.) [TCCN: ENGL 1302.]

2013 Introduction to Literature
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.
Introductory study of great works of literature with an emphasis on novels, plays, and poetry by British and American authors. Designed for nonmajors.

2213 Literary Criticism and Analysis
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.
A study of poetry, fiction, and drama, with close attention to literary terms, literary criticism, and the characteristics of each genre. This course includes intensive reading and extensive writing requirements and is designed to prepare students who intend to take advanced courses in literature and other who have a commitment to the rigorous study of literature.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2223</td>
<td>Major British Writers I</td>
<td>(3-0)</td>
<td>Completion of the Core Curriculum requirement in literature.</td>
<td>Study of representative works of major British writers from Chaucer to Milton (excluding Shakespeare). Required of students majoring in English. [TCCN: ENGL 2322.]</td>
</tr>
<tr>
<td>2233</td>
<td>Major British Writers II</td>
<td>(3-0)</td>
<td>Completion of the Core Curriculum requirement in literature.</td>
<td>Study of representative works of major British writers from the Age of Pope to the early twentieth century. Required of students majoring in English. [TCCN: ENGL 2323.]</td>
</tr>
<tr>
<td>2263</td>
<td>Major American Writers</td>
<td>(3-0)</td>
<td>Completion of the Core Curriculum requirement in literature.</td>
<td>Study of representative works of major American writers. Required of students majoring in English.</td>
</tr>
<tr>
<td>2323</td>
<td>Creative Writing: Fiction</td>
<td>(3-0)</td>
<td>Completion of the Core Curriculum requirement in literature.</td>
<td>Offers the opportunity for intensive practice and development of techniques in the writing of fiction.</td>
</tr>
<tr>
<td>2333</td>
<td>Creative Writing: Poetry</td>
<td>(3-0)</td>
<td>Completion of the Core Curriculum requirement in literature.</td>
<td>Offers the opportunity for intensive practice and development of techniques in the writing of poetry.</td>
</tr>
<tr>
<td>2383</td>
<td>Multi-ethnic Literatures of the United States</td>
<td>(3-0)</td>
<td>Completion of Core Curriculum requirement in literature.</td>
<td>A survey of the literature of various minority groups such as Native American, African American, and Hispanic. Designed for nonmajors.</td>
</tr>
<tr>
<td>2413</td>
<td>Technical Writing</td>
<td>(3-0)</td>
<td>Completion of Core Curriculum rhetoric requirement.</td>
<td>Techniques of expository writing, particularly adapted to students in technological and scientific subjects. [TCCN: ENGL 2311.]</td>
</tr>
<tr>
<td>2423</td>
<td>Literature of Texas and the Southwest</td>
<td>(3-0)</td>
<td>Completion of Core Curriculum requirement in literature.</td>
<td>Study of the literature of Texas and the Southwest, including an examination of the region’s multicultural heritage. Designed for nonmajors.</td>
</tr>
<tr>
<td>2433</td>
<td>Editing</td>
<td>(3-0)</td>
<td>ENG 2413</td>
<td>Principles and applications of production editing and technical editing, including evaluation and revision of style, tone, and organization of documents. Practice in the use of editing symbols and copy marking. (Same as COM 2433. Credit cannot be earned for both ENG 2433 and COM 2433.)</td>
</tr>
<tr>
<td>3033</td>
<td>American Literature, 1945 to Present</td>
<td>(3-0)</td>
<td>ENG 2213</td>
<td>Critical study of major American writers of the past five decades.</td>
</tr>
<tr>
<td>3053</td>
<td>American Literature to 1870</td>
<td>(3-0)</td>
<td>ENG 2213</td>
<td>Study of major American writers before the late nineteenth century.</td>
</tr>
<tr>
<td>3063</td>
<td>American Literature, 1870-1945</td>
<td>(3-0)</td>
<td>ENG 2213</td>
<td>Study of major American writers of the late nineteenth and early twentieth centuries.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisite(s)</td>
<td>Description</td>
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<tr>
<td>3073</td>
<td>Young Adult Literature</td>
<td>3</td>
<td>Completion of the Core Curriculum requirement in literature.</td>
<td>Literary analysis of the kinds of reading available for adolescents: poetry, drama, biography, science fiction, mystery, and fantasy. Both classics and current trends will be considered. Emphasis on the novel. (Formerly ENG 2373. Credit cannot be earned for both ENG 3073 and ENG 2373.)</td>
</tr>
<tr>
<td>3113</td>
<td>Studies in Individual Authors</td>
<td>3</td>
<td>ENG 2213.</td>
<td>Study of the works of an individual British or American author or of several authors examined in relation to one another. May be repeated for credit when authors vary.</td>
</tr>
<tr>
<td>3123</td>
<td>Modern Fiction</td>
<td>3</td>
<td>ENG 2213.</td>
<td>Critical survey of American, British, and Continental fiction of the twentieth century, studied intensively in relation to the development of characteristically modern techniques.</td>
</tr>
<tr>
<td>3133</td>
<td>Women and Literature</td>
<td>3</td>
<td>ENG 2213. Any 2200 course in English.</td>
<td>Critical study of the presentation of women and feminist issues in various literary forms.</td>
</tr>
<tr>
<td>3143</td>
<td>Modern Drama</td>
<td>3</td>
<td>ENG 2213.</td>
<td>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.</td>
</tr>
<tr>
<td>3153</td>
<td>Topics in Drama</td>
<td>3</td>
<td>ENG 2213.</td>
<td>Study of one or more periods (e.g., Tudor-Stuart, contemporary) or modes (e.g., comedy, tragedy) of drama. May be repeated for credit when topics vary.</td>
</tr>
<tr>
<td>3213</td>
<td>Chaucer</td>
<td>3</td>
<td>ENG 2223.</td>
<td>Critical study of the <em>Canterbury Tales</em> and other poems. Texts in Middle English.</td>
</tr>
<tr>
<td>3223</td>
<td>Shakespeare: The Early Plays</td>
<td>3</td>
<td>ENG 2213.</td>
<td>Critical study of comedies, histories, and tragedies from the earlier period (1590-1601).</td>
</tr>
<tr>
<td>3233</td>
<td>Shakespeare: The Later Plays</td>
<td>3</td>
<td>ENG 2213.</td>
<td>Critical study of comedies, tragedies, and romances from the later period (1602-1613).</td>
</tr>
<tr>
<td>3243</td>
<td>The English Novel</td>
<td>3</td>
<td>ENG 2213.</td>
<td>Critical survey of English novels, selected chiefly from the eighteenth and nineteenth centuries.</td>
</tr>
<tr>
<td>3253</td>
<td>The American Novel</td>
<td>3</td>
<td>ENG 2213.</td>
<td>Reading and discussion of representative American novels.</td>
</tr>
<tr>
<td>3273</td>
<td>Milton</td>
<td>3</td>
<td>ENG 2213.</td>
<td>Reading and analysis of Milton’s major poems and selected prose in the context of his times.</td>
</tr>
</tbody>
</table>
3303  **Theory and Practice of Composition**  
(3-0) 3 hours credit. Prerequisite: ENG 2213. 
Extensive practice in the techniques of clear, effective writing. Designed for students who will write in their professions and will supervise the writing of others.

3313  **Advanced Composition**  
(3-0) 3 hours credit. Prerequisite: ENG 2213. 
Study of the principles and procedures of informational and persuasive prose. Emphasis on coherence, liveliness, persuasiveness, and originality. Extensive writing practice, including the writing of arguments.

3323  **History of the English Language**  
(3-0) 3 hours credit. Prerequisite: Completion of the Core Curriculum requirement in literature. 
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 Core Curriculum requirement in literature. 
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 Core Curriculum requirement in literature. 
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 topics such as semantics, pragmatics, and language change.

3393  **Theory of Literature**  
(3-0) 3 hours credit. Prerequisite: ENG 2213. 
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.)

3413  **Specialized Professional Writing**  
(3-0) 3 hours credit. Prerequisite: ENG 2413. 
Writing for specialized purposes such as news releases, feature articles, reports, newsletters, speeches, scriptwriting, advertising, and professional correspondence.

3513  **Mexican American Literature**  
(3-0) 3 hours credit. Prerequisite: ENG 2213 or ENG 2263. 
Critical study of literature by and about Mexican Americans, including prose, verse, drama, essays, and autobiography. Concentration on writings since 1959.

3613  **African American Literature**  
(3-0) 3 hours credit. Prerequisite: ENG 2213 or ENG 2263 
Critical study of literature by and about African Americans, including prose, verse, drama, essays, and autobiography.

4013  **Restoration and Eighteenth-Century Literature**  
(3-0) 3 hours credit. Prerequisite: ENG 2233. 
Selected readings in the fiction, drama, poetry, and prose of the British literature of the late seventeenth century and the eighteenth century.

4023  **Romantic Literature**  
(3-0) 3 hours credit. Prerequisite: ENG 2233. 
Selected readings in the fiction, poetry, and prose of the British Romantic period.
4033 Literary Modes and Genres
(3-0) 3 hours credit. Prerequisite: ENG 2223 or ENG 2233.
Intensive study of a single mode or genre such as comedy, tragedy, allegory, satire, epic, or a type of nonfiction such as biography. May be repeated for credit when topics vary.

4053 Modern British and American Poetry
(3-0) 3 hours credit. Prerequisite: ENG 2233 or ENG 2263.
An intensive study of chief modern poets.

4063 Medieval English Literature
(3-0) 3 hours credit. Prerequisite: ENG 2223.
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.
Selected readings from major writers of the sixteenth and early seventeenth centuries (excluding Shakespeare).

4143 Victorian Literature
(3-0) 3 hours credit. Prerequisite: ENG 2233
Selected readings in the fiction, poetry, and nonfiction prose of major Victorian writers.

4393 Feminist Theory of Literature
(3-0) 3 hours credit. Prerequisite: ENG 3133 or ENG 3393.
Critical study of feminist theory and the relationship of gender to literature. Selected readings from major feminist theorists in connection with the study of literary texts.

4423 Studies in Advanced Linguistics
(3-0) 3 hours credit. Prerequisite: ENG 3343 or LNG 3913.
Specialized study of one or more areas of linguistic research, including historical linguistics, sociolinguistics, dialectology, linguistics for literary analysis, or languages in contact. May be repeated for credit when topics vary.

4433 Advanced Professional Writing
(3-0) 3 hours credit. Prerequisites: Completion of the Core Curriculum rhetoric requirement and completion of ENG 2413 or the equivalent.
Development of complex documents such as manuals, proposals, grants, environmental impact studies, newsletters, and brochures. Extensive practice in writing, layout and design, and preparation of professional documents. May be repeated when topics vary.

4523 Writer’s Workshop: Advanced Fiction Writing
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Designed for students who have demonstrated potential as fiction writers. May be repeated for credit, but not more than 12 semester credit hours of ENG 4523 and/or ENG 4533 will apply to a bachelor’s degree, and not more than 6 hours will apply toward the English major.

4533 Writer’s Workshop: Advanced Poetry Writing
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Designed for students who have demonstrated potential as poets. May be repeated for credit, but not more than 12 semester credit hours of ENG 4523 and/or ENG 4533 will apply to a bachelor’s degree, and not more than 6 hours will apply toward the English major.

4613 Topics in Mexican American Literature
(3-0) 3 hours credit. Prerequisite: ENG 2263 or ENG 3513.
Critical study of a topic in Mexican American literature: author, genre, or theme. May be repeated for credit when topics vary.
4713  **Topics in African American Literature**  
(3-0) 3 hours credit. Prerequisite: ENG 2263 or ENG 3613.  
Critical study of a topic in African American literature: author, genre, or theme. May be repeated for credit when topics vary.

4911-3  **Independent Study**  
1-3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student’s advisor, the Department Chair, 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4933  **Internship**  
3 hours credit. Prerequisite: Consent of instructor.  
Supervised experience relevant to English. May be repeated once for credit, but no more than 3 semester credit hours will apply toward the English major.

4953  **Special Studies in English**  
(3-0) 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 may be repeated for credit when the topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4973  **Seminar for English Majors**  
(3-0) 3 hours credit. Prerequisites: 12 upper-division semester credit hours in English.  
This undergraduate seminar, limited to English majors in their senior 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.

4991-3  **Honors Thesis**  
1 to 3 hours credit. Prerequisites: Consent of instructor and Department Scholarship and Honors Committee; enrollment in or completion of ENG 4973.  
Supervised research and preparation of an Honors Thesis for the purpose of earning English Honors.

**Honors in Humanities**

Students whose grade point average in the humanities major before the beginning of their final year at UTSA is 3.25 or above, and whose overall grade point average is 3.0, may earn Honors in Humanities. In order to do so, a student must complete a substantial paper approved by the Department Scholarship and Honors Committee and maintain a 3.25 grade point average in the major. The grade point average requirements apply to all transfer work and courses taken at UTSA.

**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 credit hours required for this degree is 120, including the hours of the Core Curriculum requirements. Thirty-nine of the total semester credit hours required for the degree must be at the upper-division level.

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.
Core Curriculum requirements: Students seeking the Bachelor of Arts degree in Humanities must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

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<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
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</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | Mathematics (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
Science (6 semester credit hours)  
Three hours from Level One and three hours from Level Two will satisfy this core requirement. |
| **Domain II: Society and Culture** | United States History and Diversity (6 semester credit hours)  
Any six hours listed under this section in the list of core courses will satisfy this core requirement.  
Political Studies (6 semester credit hours)  
POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.  
Social and Behavioral Sciences (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
Economics (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
| **Domain III: Literature and the Arts** | Literature (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
The Arts (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
| **Domain IV: Interdisciplinary Studies** | (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
Note: If a language is used to satisfy this three-hour requirement, students will need to take an additional three hours in the same language for the degree requirement. |
Degree Requirements

A. 42 semester credit hours:

1. 12 required semester credit hours:
   
   - CLA 2013 Introduction to Ancient Greece
   - CLA 2023 Introduction to Ancient Rome
   - HUM 3013 History of Ideas
   - HUM 4973 Seminar for Humanities Majors

2. 9 semester credit hours of historical-period courses selected from the following:
   
   - HUM 3023 The Medieval World
   - HUM 3033 The Renaissance Idea of Humanity
   - HUM 3043 Classicism and Enlightenment
   - HUM 3053 The Romantic Age
   - HUM 3063 The Modern World

3. 21 semester credit hours that 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; at least 12 hours must be at the upper-division level.
   
   The student must take at least 3 semester credit hours in each of the following five areas:
   
   Classical studies (CLA), philosophy (PHI), humanities (HUM), art history and criticism (AHC), and literature in one of the following languages: English, French, German, Italian, Spanish, or Russian (this includes literature courses in translation, and culture and civilization courses).
   
   The remaining 6 semester credit hours may be selected from these five areas or, with the approval of the undergraduate advisor, from other relevant areas such as history, music history, or the social sciences.

B. 6 semester credit hours in a single language other than English

C. 30 semester credit hours of electives

Minor in Humanities

All students pursuing the Minor in Humanities must complete 21 semester credit hours.

A. HUM 3013 History of Ideas

B. 9 semester credit hours of background courses, with 3 hours selected from each of the three following groups:

1. CLA 2013 Introduction to Ancient Greece
   - CLA 2023 Introduction to Ancient Rome
   - CLA 2033 Introduction to Classical Literature

2. PHI 2013 Basic Philosophical Problems
   - PHI 2023 Introduction to Ancient Philosophy
   - PHI 2033 Introduction to Modern Philosophy

3. AHC 1113 Survey of Art and Architecture from Prehistoric Times to 1350
   - AHC 1123 Survey of Art and Architecture in Europe and the New World from 1350 to 1750
   - AHC 1133 Survey of Modern Art

C. 9 additional semester credit hours of upper-division coursework in Humanities
COURSE DESCRIPTIONS
HUMANITIES
(HUM)

2093 World Religions
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.
Examination of the origins, teachings, development, and philosophical foundations of the world’s chief religious
movements, including Hinduism, Buddhism, Shintoism, Confucianism, Taoism, Sikhism, Jainism, Islam,
Zoroastrianism, Judaism, and Christianity. (Formerly HUM 3093 and PHI 3063. Credit cannot be earned for
both HUM 2093 and either HUM 3093 or PHI 3063.) [TCCN: PHIL 1304.]

3013 History of Ideas
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.
Survey of the development and influence of major philosophical, scientific, and aesthetic conceptions in Western
civilization from ancient times to the present.

3023 The Medieval World
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.
Interdisciplinary investigation of medieval thought and culture as exemplified in major works of literature,
philosophy, theology, and history.

3033 The Renaissance Idea of Humanity
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.
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 view of the world.

3043 Classicism and Enlightenment
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.
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: Completion of Core Curriculum rhetoric requirement.
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.

3063 The Modern World
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.
Interdisciplinary investigation of modern thought in the late nineteenth and twentieth centuries, as exemplified in
major works of philosophy, literature, and the fine arts.

3103 American Film
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.
Survey of the art, history, development, and major critical approaches to American film with attention to such
topics as classic and revisionist film styles, cinematic apparatus, the history and development of film genres, and
film as a part of American culture.

3213 The Christian Classics
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.
The opportunity for an intensive survey of selected works of writers studied in the context of Christian thought.

3223 The Bible as Literature
(3-0) 3 hours credit. Prerequisite: Completion of the Core Curriculum requirement in literature.
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: Completion of Core Curriculum rhetoric requirement. Critical study of selected Continental novelists of the last hundred years.

3623 Topics in National Cultures and Civilizations
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement. 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.

4911-3 Independent Study
1 to 3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student’s advisor, the Department Chair, 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4953 Special Studies in Humanities
(3-0) 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 may be repeated for credit when the topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4973 Seminar for Humanities Majors
(3-0) 3 hours credit. Prerequisites: 12 upper-division semester credit hours in humanities, classics, or philosophy. Undergraduate seminar limited to humanities majors in their senior year. Content varies with each instructor. May be repeated once for credit when topics vary.

4991-3 Honors Thesis
1 to 3 hours credit. Prerequisites: Consent of instructor and Department Scholarship and Honors Committee; enrollment in or completion of HUM 4973. Supervised research and preparation of an Honors Thesis for the purpose of earning Humanities Honors.

Honors in Philosophy
Students whose grade point average in the philosophy major before the beginning of their final year at UTSA is 3.25 or above, and whose overall grade point average is 3.0, may earn Honors in Philosophy. In order to do so, a student must complete a substantial paper approved by the Department Scholarship and Honors Committee and maintain a 3.25 grade point average in the major. The grade point average requirements apply to all transfer work as well as courses taken at UTSA.

Bachelor of Arts Degree in Philosophy
The minimum number of semester credit hours required for this degree is 120, including the hours of the Core Curriculum requirements. Thirty-nine of the total semester credit hours required for the degree must be at the upper-division level.

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Arts degree in Philosophy must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.
### Degree Requirements

**A. 30 semester credit hours:**

<table>
<thead>
<tr>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
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<tbody>
<tr>
<td><strong>Rhetoric</strong> (6 semester credit hours)**</td>
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### Core Curriculum Requirements

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<td>PHI 2013 Basic Philosophical Problems</td>
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<tr>
<td>PHI 2023 Introduction to Ancient Philosophy</td>
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<tr>
<td>PHI 2033 Introduction to Modern Philosophy</td>
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<tr>
<td>PHI 2043 Introductory Logic</td>
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<tr>
<td>PHI 3213 Ethics</td>
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<tr>
<td>PHI 3223 Approaches to Knowledge and Reality</td>
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<tr>
<td>12 additional upper-division semester credit hours of philosophy electives</td>
<td></td>
</tr>
</tbody>
</table>
B. 6 semester credit hours in a single language other than English

C. 12 semester credit hours of approved support work, at least 6 hours of which must be at the upper-division level, in one of the following categories:

1. Mathematics and natural sciences: computer science (CS), mathematics (MAT), statistics (STA), chemistry (CHE), geology (GEO), physics (PHY), astronomy (AST), and biology (BIO)
2. Social and behavioral sciences: American studies (AMS), anthropology (ANT), history (HIS), psychology (PSY), economics (ECO), political science (POL), and sociology (SOC)
3. Language, literature, and humanities: English (ENG), humanities (HUM), classical studies (CLA), communication (COM), comparative studies in the humanities (CSH), linguistics (LNG), and foreign languages
4. History and theory of art and music: art history and criticism (AHC) and music (MUS)
5. Other subjects as may be individually justified by the student and approved by the undergraduate advisor

D. 30 semester credit hours of electives

**Minor in Philosophy**

All students pursuing the Minor in Philosophy must complete 21 semester credit hours.

A. 18 semester credit hours of required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PHI 2013</td>
<td>Basic Philosophical Problems</td>
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<tr>
<td>PHI 202</td>
<td>Introduction to Ancient Philosophy</td>
</tr>
<tr>
<td>PHI 2033</td>
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<td>PHI 3213</td>
<td>Ethics</td>
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<tr>
<td>PHI 3223</td>
<td>Approaches to Knowledge and Reality</td>
</tr>
</tbody>
</table>

B. 3 additional upper-division semester credit hours in Philosophy

**COURSE DESCRIPTIONS**

**PHILOSOPHY**

**PHI (PHI)**

2013 **Basic Philosophical Problems**

(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement. 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. [TCCN: PHIL 1301.]

2023 **Introduction to Ancient Philosophy**

(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement. 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. [TCCN: PHIL 2316.]

2033 **Introduction to Modern Philosophy**

(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement. 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 humankind’s attempt to achieve a satisfactory worldview. [TCCN: PHIL 2317.]
2043 Introductory Logic  
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.  
Study of the principles of valid argument definition, deductive and inductive inference, and fallacies. [TCCN: PHIL 2303.]

2123 Moral Issues in Contemporary America  
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.  
Examination of ethical issues facing American society, with emphasis on medical, social, and business ethics.

3013 Philosophy of Religion  
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.  
Examination of traditional religious beliefs and such concepts as faith and knowledge, mysticism and theology,  
the existence and nature of God, and the relation of religion to experience and social life.

3033 Philosophy of Science  
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.  
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: Completion of Core Curriculum rhetoric requirement.  
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 Asian Philosophy  
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.  
Examination of the philosophical and religious traditions of the East, with emphasis on various schools such as  
Vedanta, Buddhism, Confucianism, and Taoism.

3213 Ethics  
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.  
Examination of ethical theory and of the nature and scope of ethical discourse, with emphasis on the concepts of  
good, human happiness, self-realization, virtue, duty, responsibility, and the means-ends relationship; reading  
will include selected classical and contemporary texts.

3223 Approaches to Knowledge and Reality  
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.  
Examination of the interrelations between the 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, and meaning and existence. Reading will include selected classical and contemporary  
texts.

3343 Issues and Movements in Twentieth-Century Philosophy  
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.  
Sustained study of recent works focusing on one or more specific issues or movements, such as philosophy of  
language, philosophy of mind, epistemology, political philosophy, theoretical or applied ethics, phenomenology,  
existentialism, hermeneutics, or postmodernism. May be repeated when topics vary.

4013 Studies in Individual Philosophers  
(3-0) 3 hours credit. Prerequisite: Consent of instructor.  
Examination of the works of an individual philosopher or of several philosophers studied in relationship to one  
another. May be repeated for credit when topics vary.
4113 **Contemporary Analytic Philosophy**  
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.
An in-depth examination of the major trends in the development of the Anglo-American philosophical tradition during the twentieth century, including the early analysts, the development of logical positivism, and the emergence of nonformal linguistic analysis.

4123 **Contemporary Continental Philosophy**  
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.
A sustained treatment of the major trends in twentieth-century European philosophy, including movements such as phenomenology, existentialism, hermeneutics, and postmodernism; emphasis on historical development.

4333 **Philosophy of Language**  
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.
A critical examination of traditional problems dealing with the nature and function of language. Representative issues include analyticity, reference, proper names, metaphorical meaning, and speech-act theory.

4911-3 **Independent Study**  
1–3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student’s advisor, the Department Chair, 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4953 **Special Studies in Philosophy**  
(3-0) 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 may be repeated for credit when topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4991-3 **Honors Thesis**  
1–3 hours credit. Prerequisite: Consent of instructor and Department Scholarship and Honors Committee.  
Supervised research and preparation of an Honors Thesis for the purpose of earning Philosophy Honors.

**Honors in Classical Studies**

Students whose grade point average in the classical studies major before the beginning of their final year at UTSA is 3.25 or above, and whose overall grade point average is 3.0, may earn Honors in Classical Studies. In order to do so, a student must complete a substantial paper approved by the Department Scholarship and Honors Committee and maintain a 3.25 grade point average in the major. The grade point average requirements apply to all transfer work as well as courses taken at UTSA.

**Bachelor of Arts Degree in Classical Studies**

The minimum number of semester credit hours required for this degree is 120, including the hours of the Core Curriculum requirements. Thirty-nine of the total semester credit hours required for the degree must be at the upper-division level.

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

**Core Curriculum requirements:** Students seeking the Bachelor of Arts degree in Classical Studies must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.
Degree Requirements

A. 23 semester credit hours:

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<th>Core Curriculum Requirements</th>
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<tbody>
<tr>
<td><strong>Rhetoric</strong> (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement: ENG 1013 Freshman Composition, ENG 1023 Discourse across the Disciplines</td>
</tr>
<tr>
<td><strong>Domain I: Mathematics and Science</strong></td>
<td>Mathematics (3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement. Science (6 semester credit hours) Three hours from Level One and three hours from Level Two will satisfy this core requirement.</td>
</tr>
<tr>
<td><strong>Domain II: Society and Culture</strong></td>
<td>United States History and Diversity (6 semester credit hours) Any six hours listed under this section in the list of core courses will satisfy this core requirement. Political Studies (6 semester credit hours) POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement. Social and Behavioral Sciences (3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement. Economics (3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td><strong>Domain III: Literature and the Arts</strong></td>
<td>Literature (3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement. The Arts (3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td><strong>Domain IV: Interdisciplinary Studies</strong></td>
<td>(3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

Degree Requirements

A. 23 semester credit hours:

<table>
<thead>
<tr>
<th>Department of English, Classics, and Philosophy / 245</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAT 1114 Introductory Latin I (or the equivalent)</td>
</tr>
<tr>
<td>LAT 1124 Introductory Latin II (or the equivalent)</td>
</tr>
<tr>
<td>LAT 2113 Intermediate Latin I (or the equivalent)</td>
</tr>
<tr>
<td>LAT 2123 Intermediate Latin II (or the equivalent)</td>
</tr>
<tr>
<td>LAT 3113 Selected Latin Authors</td>
</tr>
<tr>
<td>LAT 4013 Advanced Readings in Latin</td>
</tr>
<tr>
<td>PHI 2023 Introduction to Ancient Philosophy</td>
</tr>
</tbody>
</table>

B. 6 semester credit hours of approved support work. Support work may be drawn from upper-division (3000 or 4000 level) courses listed in HUM, ANT, ENG, PHI, COM, MUS, ARC, CSH, HIS, or any foreign language of the Department of Modern Languages and Literatures in the UTSA 2002–2004 Undergraduate Catalog.
C. 21 semester credit hours of prescribed electives:

- CLA 2013 Introduction to Ancient Greece
- CLA 2023 Introduction to Ancient Rome
- CLA 3023 Classical Myths and Literature
- CLA 3053 Topics in Classical Genres
- CLA 3063 Topics in the Art and Architecture of the Classical World
- CLA 3123 Cultural Issues in Classical Antiquity
- CLA 3513 Topics in Classical History
- CLA 4913 Independent Study
- CLA 4953 Special Studies in Classics

D. 28 semester credit hours of electives

**Minor in Classical Studies**

All students pursuing the minor in Classical Studies must complete 21 semester credit hours of Classics courses:

A. Successful completion of LAT 2113 or its equivalent.

B. 9 semester credit hours of required courses:

- CLA 2013 Introduction to Ancient Greece
- CLA 2023 Introduction to Ancient Rome
- CLA 2033 Introduction to Classical Literature

D. 9 additional semester credit hours of upper-division coursework in Classics or Latin.

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**COURSE DESCRIPTIONS**

**CLASSICS**

**(CLA)**

2013 **Introduction to Ancient Greece**

(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement. Introduction to the civilization and cultural achievements of ancient Greece, including history, religion, philosophy, literature, and art.

2023 **Introduction to Ancient Rome**

(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement. Introduction to the civilization and cultural achievements of ancient Rome, including history, religion, philosophy, literature, and art.

2033 **Introduction to Classical Literature**

(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement. Introductory study of selected works of ancient Greek and Roman authors, with emphasis on epic, drama, satire, and lyric.

2323 **Classical Mythology**

(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement. Critical survey of secular and religious classical mythology; attention to the use of myth in ancient literature and the functions of myth in historical, cultural, and cross-cultural contexts.
3023  **Classical Myths and Literature**  
(3-0) 3 hours credit. Prerequisite: Completion of the Core Curriculum requirement in literature.  
Critical examination of ancient Greek and Roman myths and their functions in literary texts and ancient societies; attention to current theories and methodologies of mythic analysis.

3053  **Topics in Classical Genres**  
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.  
Consideration of texts selected to illustrate the structural and conceptual properties of a given genre in the classical world, e.g., comedy, poetry, or tragedy. May be repeated for credit when topics vary.

3063  **Topics in the Art and Architecture of the Classical World**  
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.  
A study of one or more themes, periods, traditions, or archaeological sites in the art and architecture of the ancient Greek and Roman world. May be repeated for credit when topics vary.

3123  **Cultural Issues in Classical Antiquity**  
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.  
Examination of issues in ancient Greek and Roman power relations and social differences as reflected in classical literature and historical material. Coverage of such topics as slavery, attitudes towards barbarians, gender, and intergenerational strife. May be repeated for credit when topics vary.

3513  **Topics in Classical History**  
(3-0) 3 hours credit. Prerequisite: Completion of Core Curriculum rhetoric requirement.  
An examination of selected events, trends, and transformations in the history of ancient Greece and ancient Rome. May be repeated for credit when topics vary.

4911-3  **Independent Study**  
1 to 3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student’s advisor, the Department Chair, 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 six hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4953  **Special Studies in Classics**  
(3-0) 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 no more than six hours, regardless of discipline, will apply to a bachelor’s degree.

4991-3  **Honors Thesis**  
1-3 hours credit. Prerequisite: Consent of instructor and Department Scholarship and Honors Committee.  
Supervised research and preparation of an Honors Thesis for the purpose of earning Classical Studies Honors.

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**COURSE DESCRIPTIONS**  
**LATIN**  
**(LAT)**

1114  **Introductory Latin I**  
(3-2) 4 hours credit.  
Fundamentals of Latin grammar and readings in Latin.

1124  **Introductory Latin II**  
(3-2) 4 hours credit. Prerequisite: LAT 1114.  
Fundamentals of Latin grammar and readings in Latin. [TCCN: LATI 2311.]
2113 **Intermediate Latin I**  
(3-0) 3 hours credit. Prerequisite: LAT 1124 or the equivalent.  
Continued practice in reading Latin. Selections from Cicero, Sallust, Catullus, and/or Virgil. Review of Latin grammar and syntax.

2123 **Intermediate Latin II**  
(3-0) 3 hours credit. Prerequisite: LAT 2113 or the equivalent.  
Reading and in-depth analysis of a particular Latin author such as Ovid, Virgil, Cicero, Lucretius, Petronius, or Plautus. (Formerly CLA 2123 and LAT 2023. Credit cannot be earned for both LAT 2123 and either CLA 2123 or LAT 2023.) [TCCN: LATI 2312.]

3113 **Selected Latin Authors**  
(3-0) 3 hours credit. Prerequisite: LAT 2123 or the equivalent.  
Close reading and critical analysis of a Latin text or texts, author, topic, or genre. May be repeated for credit when authors vary.

4013 **Advanced Readings in Latin**  
(3-0) 3 hours credit. Prerequisite: LAT 2123 or the equivalent.  
Concentrated readings and interpretation of a selected Latin author, genre, or series of texts. May be repeated for credit when topics vary.

### COURSE DESCRIPTIONS  
**THEATER**  
(THR)

1013 **Acting I**  
(3-0) 3 hours credit. Prerequisite: Completion of the Core Curriculum requirement in literature.  
Fundamental techniques of acting, emphasizing the actor’s approach to characterization and relationship to all parts of the play’s production. [TCCN: DRAM 1351.]

1023 **Acting II**  
(3-0) 3 hours credit. Prerequisite: Completion of the Core Curriculum requirement in literature.  
Sustained character portrayal. Intensive work in stage movement and vocal techniques, including dialects. [TCCN: DRAM 1352.]
DEPARTMENT OF HISTORY

The Department of History offers Bachelor of Arts degrees in American Studies (offered jointly with the Department of English, Classics, and Philosophy) and in History. American Studies is an interdisciplinary examination of the relationships among the diverse elements of American culture. History is the study of the past of human society. Each major combines a specialization in the discipline with support work in a related area. The support work area involves a specific number of semester credit hours outside the major discipline which forms a cohesive whole and is approved by the student’s advisor. The department also offers Minors in American Studies, History, and Women and Gender Studies.

INTERNSHIP STUDY

Internship study entails supervised experience within selected organizations in the San Antonio area. Placement is arranged with the internship coordinator of the Department of History. Supervision and grading of the internship experience are normally done by department faculty members. The various degree plans within the department 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 credit hours may be counted toward a bachelor’s degree. 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 department office.

DEPARTMENT HONORS

The Department of History awards Department Honors to certain of its outstanding students and provides the opportunity for advanced study under close faculty supervision.

Selection of students for honors designation is based on the student’s academic performance and recommendation by the faculty in the student’s major discipline. To be eligible for the program, students must have a minimum overall grade point average of 3.0 at UTSA and a minimum grade point average of 3.5 in their major at UTSA. The minimum grade point averages must be maintained for students to receive the approval of the Department Honors Committee and the discipline faculty. Students applying for Department Honors are expected to enroll in the appropriate honors thesis course during their final two semesters. The completed thesis must be approved by the supervising faculty sponsor and another departmental 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 the interdisciplinary analysis of American cultures. While this program focuses on the cultures of the United States, study may extend through the Americas. The program links different modes of expression such as literature, music, art, film and visual expression, sports, architecture, technology, and religion to describe the cultural and intellectual life of American people. The methodology of American Studies encourages students to look to other disciplines such as anthropology, folklore, history, literature, economics, philosophy, political science, sociology, and women’s studies and to find the connections among them. The major allows students to develop a course of study adapted to their own interests and undergraduate needs, with the consultation of the American Studies advisor. Students will find the program excellent preparation for careers in many fields, such as communications, human resources, museum studies, nonprofit organizations, public affairs, public relations, journalism, criminal justice, law, and the military. Many students continue in graduate work in American Studies, anthropology, communications, English, history, law, or religion.

The minimum number of semester credit hours required for this degree, including the Core Curriculum requirements, is 120. Thirty-nine of the total semester credit hours required for the degree must be at the upper-division level.

All candidates for this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.
Core Curriculum requirements: Students seeking the Bachelor of Arts degree in American Studies must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rhetoric</strong> (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement:</td>
</tr>
<tr>
<td></td>
<td>ENG 1013 Freshman Composition</td>
</tr>
<tr>
<td></td>
<td>ENG 1023 Discourse across the Disciplines</td>
</tr>
<tr>
<td><strong>Domain I: Mathematics and Science</strong></td>
<td><strong>Mathematics</strong> (3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td><strong>Science</strong> (6 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Three hours from Level One and three hours from Level Two will satisfy this core requirement.</td>
</tr>
<tr>
<td><strong>Domain II: Society and Culture</strong></td>
<td><strong>United States History and Diversity</strong> (6 semester credit hours)</td>
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<td></td>
<td>Any six hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<tr>
<td></td>
<td><strong>Political Studies</strong> (6 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td><strong>Social and Behavioral Sciences</strong> (3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>AMS 2013 Basic Issues in American Culture</td>
</tr>
<tr>
<td></td>
<td><strong>Economics</strong> (3 semester credit hours)</td>
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<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<tr>
<td><strong>Domain III: Literature and the Arts</strong></td>
<td><strong>Literature</strong> (3 semester credit hours)</td>
</tr>
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<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<tr>
<td></td>
<td><strong>The Arts</strong> (3 semester credit hours)</td>
</tr>
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<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td><strong>Domain IV: Interdisciplinary Studies</strong></td>
<td>(3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>
Degree Requirements

A. 36 semester credit hours in courses approved by the American Studies advisor, 21 of which must be at the upper-division level:

1. 21 semester credit hours of required courses:
   a. AMS 2013 Basic Issues in American Culture
      AMS 3013 Early American Culture
      AMS 3023 Modern American Culture
   b. 6 semester credit hours selected from the following:
      AMS 3033 Topics in Regional American Cultures
      AMS 3043 Topics in Ethnic American Cultures
      AMS 3053 Topics in Women and American Culture
   c. 6 semester credit hours of AMS 4823 Topics in American Culture

2. 15 semester credit hours of support work with American content from at least two disciplines. American content may be interpreted as North, South, and Central America, and the Caribbean. Support work may be chosen with the consent of the American Studies faculty advisor and must be approved by the American Studies faculty advisor.

   3 semester credit hours of AMS 4933 Internship in American Studies may be taken in partial fulfillment of this requirement.

B. 42 semester credit hours of electives

Minor in American Studies

All students pursuing a Minor in American Studies must complete 18 semester credit hours.

A. 12 semester credit hours of required courses:
   AMS 2013 Basic Issues in American Culture
   AMS 3013 Early American Culture
   AMS 3023 Modern American Culture
   AMS 4823 Topics in American Culture

B. 6 additional semester credit hours selected from the following:
   AMS 3033 Topics in Regional American Cultures
   AMS 3043 Topics in Ethnic American Cultures
   AMS 3053 Topics in Women and American Culture

To declare a Minor in American Studies, obtain advice, or seek approval of substitutions for course requirements, students should consult the College of Liberal and Fine Arts Undergraduate Advising Center.
COURSE DESCRIPTIONS
AMERICAN STUDIES
(AMS)

2013  Basic Issues in American Culture
(3-0) 3 hours credit.
Introduces students to the study of culture in the United States using the interdisciplinary American studies
approach. American identity, which includes race and ethnicity, class, gender, sexual orientation, and religion,
will be explored both historically and through popular culture.

3013  Early American Culture
(3-0) 3 hours credit.
Examines the influences that shaped American culture to the twentieth-century. Topics may include the impact
of colonialism, the Enlightenment, the frontier, industrialism, ethnicity, race, religious reform, and other factors
in the development of a distinctive society.

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, suburbanization, industrialization, race relations, popular culture, technology,
and secularization.

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 is on works that
analyze the region’s culture, literature by authors from that particular area, history, and folk traditions. Topics
may include southern, western, suburban, 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, African American, Latino, Asian, Jewish, or other cultural groups. May be
repeated for credit when topics vary.

3053  Topics in Women and American Culture
(3-0) 3 hours credit.
A study of the cultural expressions of women in America. Topics may include literature, art, music, and
philosophy by and about women; women’s roles in history; folklore relating to women; and similarities and
differences in men’s and women’s culture. May be repeated for credit when topics vary.

4823  Topics in American Culture
(3-0) 3 hours credit.
An in-depth study of a selected topic, such as American reform movements and political change, music in
American culture, sports in American culture, childhood in America, modernism and postmodernism, literary
expressions of American culture, and cultural currents in various periods of American history. May be repeated
for credit when topics vary. Two or more topics courses may be taken concurrently.

4913  Independent Study
3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student’s advisor, the
Department Chair 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 semester credit hours of independent study, regardless of discipline, will
apply to a bachelor’s degree.

UTSA 2002–2004 Undergraduate Catalog
493,6 Internship in American Studies
3 or 6 hours credit. Prerequisite: Consent of program director.
Supervised experience relevant to American studies within selected community organizations. A maximum of 6 semester credit hours may be earned through Internship in American Studies. Must be taken on a credit/no-credit basis. Only 3 semester credit hours can be applied to the major in American studies.

4993 Honors Thesis
3 hours credit. Prerequisite: Enrollment limited to candidates for Honors in American studies during their last two semesters; completion of honors examination and consent of the Honors College.
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 credit hours required for this degree, including the Core Curriculum requirements, is 120. Thirty-nine of the total semester credit hours required for the degree must be at the upper-division level.

All candidates for this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Arts degree in History must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

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<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | Mathematics (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
Science (6 semester credit hours)  
Three hours from Level One and three hours from Level Two will satisfy this core requirement. |
| **Domain II: Society and Culture** | United States History and Diversity (6 semester credit hours)  
Any six hours listed under this section in the list of core courses will satisfy this core requirement. Courses taken to satisfy Core Curriculum requirements in U.S. History and Diversity may not be used to satisfy degree requirements.  
Political Studies (6 semester credit hours)  
POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.  
Social and Behavioral Sciences (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
Economics (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
Degree Requirements

A. 33 semester credit hours in the major, 21 of which must be at the upper-division level:

1. HIS 2003 Historical Methods (students should take this course as early as possible in their program and no later than their second semester after declaring the major).

2. 9 semester credit hours selected from the world civilization sequence (IDS 2203 and IDS 2213) or from courses numbered HIS 2203 to HIS 2583.

3. 18 upper-division semester credit hours of history courses, including at least one U.S., one European, and one Latin American, African, or Asian studies. Up to 6 semester credit hours from the following may be used to fulfill this requirement:

   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
   CLA 3513 Topics in Classical History
   ECO 3163 Evolution of Economic Thought
   ECO 3183 Economic History of the United States
   POL 3113 American Political Theory
   POL 3133 Political Philosophy: Ancient and Medieval
   POL 3143 Political Philosophy: Modern
   POL 3323 Constitutional Law
   PSY 4003 History of Psychology
   SOC 3533 Border and Transnational Relations

4. 3 semester credit hours from HIS 4973 Seminar in History

B. 9 semester credit hours in approved upper-division support work from one of the following areas outside history: social and behavioral sciences, research methodology, or cultural studies. The student may choose another option: the completion of 6 semester credit hours at any level in a single language other than English and another 3 hours in a related area of study. The student must consult with his or her faculty advisor to define a cohesive support area, and the faculty advisor’s approval is required.

C. 36 semester credit hours of electives
Minor in History

All students pursuing a Minor in History must complete 18 semester credit hours.

A. 9 semester credit hours of required courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIS</td>
<td>2003 Historical Methods</td>
</tr>
<tr>
<td>IDS</td>
<td>2203 World Civilization to the Fifteenth Century</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>IDS</td>
<td>2213 World Civilization since the Fifteenth Century</td>
</tr>
</tbody>
</table>

Up to 3 hours chosen from the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIS</td>
<td>2533 Introduction to Latin American Civilization</td>
</tr>
<tr>
<td>HIS</td>
<td>2543 Introduction to Islamic Civilization</td>
</tr>
<tr>
<td>HIS</td>
<td>2553 Introduction to East Asian Civilization</td>
</tr>
<tr>
<td>HIS</td>
<td>2563 Introduction to European Civilization</td>
</tr>
<tr>
<td>HIS</td>
<td>2573 Introduction to African Civilization</td>
</tr>
<tr>
<td>HIS</td>
<td>2583 Introduction to South Asian Civilization</td>
</tr>
</tbody>
</table>

B. 9 additional semester credit hours of upper-division history electives.

To declare a Minor in History, obtain advice, or seek approval for substitutions for course requirements, students should consult the College of Liberal and Fine Arts Undergraduate Advising Center.

COURSE DESCRIPTIONS

HISTORY

(HIS)

1043 United States History: Pre-Columbus to Civil War Era
(3-0) 3 hours credit.
From a variety of perspectives, this course will analyze topics covering the geography of North America; pre-Columbian societies; European colonial societies and their transition into the national period; the development of modern economic structures and political traditions; westward expansion; class, race, ethnicity, and gender; cultural diversity and national unity; the relations of the United States to other nations and cultures; and the impact of these trends and issues on the development of the nation. [TCCN: HIST 1301.]

1053 United States History: Civil War Era to Present
(3-0) 3 hours credit.
From a variety of perspectives, this course will analyze topics covering the development of the United States as an urban industrial nation; the rising importance of the business cycle, corporations, and immigration; political traditions; class, race, ethnicity, and gender; cultural diversity and national unity; the relationship between the United States and other nations and cultures; and the impact of these trends on the development of the nation. [TCCN: HIST 1302.]

2003 Historical Methods
(3-0) 3 hours credit. Prerequisite: ENG 1013.
An introduction to the study of history in which students will consider examples and approaches to the problems of research and writing in the field. This course is designed for students completing requirements for a major or minor in history.
2013  **Daily Life in Early Modern Europe**  
(3-0) 3 hours credit. Prerequisite: HIS 2003 recommended.  
A study of some of the major historical and historiographical themes in the field of daily life in early modern Europe. Among the topics to be explored: sexuality, orthodox and nonorthodox; marriage and the family; the condition of women; attitudes toward children; deviants and outgroups. (Formerly HIS 4503. Credit cannot be earned for both HIS 2013 and HIS 4503.)

2053  **Texas History**  
(3-0) 3 hours credit.  
An overview of the development of Texas from the era of Spanish exploration and colonization to the modern period, with emphasis on major events in the nineteenth and twentieth centuries. Topics may vary, but generally will include cultural geography, contributions of ethnic minorities and women, the Republic of Texas, statehood, secession, Reconstruction, conservatism, reform, oil exploration, urbanization, and political, economic, and social change in the post-World War II era. [TCCN: HIST 2301.]

2073  **World History in the Cinema**  
(3-0) 3 hours credit.  
An analysis of several classic films to introduce for closer critical study important events and issues in world history which have intrigued film makers and their audiences as well as historians. Exploration of the similarities and differences between artistic and historical imagination.

2203  **Historical Background to Contemporary Problems**  
(3-0) hours credit.  
The purpose of this course is to acquaint students with the historical background for some major issues of the day. Topics will highlight current concerns and give insights into how the historian looks at the past, seeking to understand the forces that lead to current “hot spots.” Topics may include modern ideologies and political systems; relationship of the West and non-West; nationalism and internationalism; and environment and world resources.

2533  **Introduction to Latin American Civilization**  
(3-0) 3 hours credit.  
An introduction to Latin America examining the broader topics that shaped its history. These topics may include Native American societies; the encounter between Native Americans, Europeans, and Africans; the post-Independence era; the different paths toward nation-building; the nature of authoritarian regimes; the impact of revolutions; and the cultural development of Latin America and its historiography.

2543  **Introduction to Islamic Civilization**  
(3-0) 3 hours credit.  
An introduction to the role of Islam in world history, from the Prophet and the founding of the Umayyad Caliphate to the breakup of the Ottoman Empire. Primary focus will be on the Ottoman Empire, its institutions and culture, and its interaction with Western civilization.

2553  **Introduction to East Asian Civilization**  
(3-0) 3 hours credit.  
An introduction to East Asian history and culture from antiquity down to the beginning of the modern period around the seventeenth and eighteenth centuries. The course will cover China, Japan, Korea, and Vietnam, with particular attention to the development of culture, society, and the state in the traditional era prior to the arrival of the West in East Asia. [TCCN: HIST 2323.]

2563  **Introduction to European Civilization**  
(3-0) 3 hours credit.  
An introduction to the major historical and historiographical problems in the experience of Europe from the earliest times to the present. The course will expose students to a variety of intellectual approaches and to the diversity of European history.
2573 Introduction to African Civilization
(3-0) 3 hours credit.
An introduction to the major historical and historiographical problems in the experience of Africa from the earliest times to the present. The course will expose students to a variety of intellectual approaches and to the diversity of African history.

2583 Introduction to South Asian Civilization
(3-0) 3 hours credit.
This course explores the history, cultures, religions, and civilization of the Indian subcontinent from earliest times to the present. It begins with prehistory and the Indus civilization, the migration and settlement of the Aryans, the ancient empires of the Maurya and Gupta, and the Islamic conquest. The rise and fall of various Muslim kingdoms of the Mughal Empire, British colonial rule, the nationalist movements and independence of India, Pakistan, and Bangladesh are also discussed.

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 measures of social change.

3013 Nonviolence: Gandhi, Mandela, King
(3-0) 3 hours credit.
This course examines how Gandhi’s ideas of non-violence have been used in India and in other places in the modern world. The course will first look at the sources of Gandhi’s thinking, such as the writings of Tolstoy and Thoreau, then examine how Gandhi used nonviolence in his struggle against the British government in India. It will then examine nonviolence movements in world history, including those led in America by Martin Luther King, Jr. and in South Africa by Nelson Mandela.

3023 American Independence and National Unity, 1760-1820
(3-0) 3 hours credit.
Topics may include origins of the American Revolution, the Revolutionary War, the struggle for unity, and the early years of nationhood.

3043 History of Women in the United States: Pre-Columbus to 1890
(3-0) 3 hours credit.
An examination of how women have been affected by economic, social, cultural, and political structures, with emphasis on the role of class, race, ethnicity, region, and age. Topics may include Native American societies, colonial life, the impact of the American Revolution, the early national period, slavery, the Civil War, westward expansion, and the “cult of domesticity.” (Formerly HIS 3473. Credit cannot be earned for both HIS 3043 and HIS 3473.)

3053 History of Women in the United States: Since 1890
(3-0) 3 hours credit.
This course will offer an analysis of women’s lives in United States history since 1890 and may examine women’s role in the Progressive Era; World Wars; the Civil Rights Movement; and the Feminist Movement. It will consider the effects of economic, social, cultural, and political structures on women since 1890, with particular attention to the role of class, race, ethnicity, region, and age. (Formerly HIS 3473. Credit cannot be earned for HIS 3053 and HIS 3473.)

3063 The Spanish Borderlands, 1521-1821
(3-0) 3 hours credit.
An overview and analysis of Spanish exploration and colonization in the northern frontier of colonial Mexico, including the introduction of Hispanic institutions, customs, and traditions in the development of a frontier society in the region adjacent to the international boundary.
3073 **The Mexican Borderlands/The American Southwest**  
(3-0) 3 hours credit.  
American westward movement into the Southwest, the settlement and development of the area, and 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 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 nineteenth and twentieth 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 symbolism 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.

3113 **The American Indian**  
(3-0) 3 hours credit.  
A history of the American Indian from European contact to the present. Attention is given to the internal cultural, economic, and political developments of the different Indian groups as well as to the European and American developments and policies affecting the Indian.

3123 **Colonial Texas under Spanish and Mexican Rule to 1836**  
(3-0) 3 hours credit.  
An overview of Texas history beginning with sixteenth-century and seventeenth-century Spanish exploration, with emphasis on eighteenth-century colonization, and culminating in nineteenth-century Anglo-American immigration and the sociopolitical changes that resulted in Texas independence.

3133 **Themes in the Social History of the United States**  
(3-0) 3 hours credit.  
A survey of social history focusing on the American experience. The course explores changes in the family, work, gender roles, mobility, migration, urbanization, and industrialization, with special attention to class, race, ethnicity, and gender.

3143 **History and Anthropology**  
(3-0) 3 hours credit.  
The course will examine the method by which historians and anthropologists have made sense of each other’s work in different times and places, and how the two disciplines have borrowed and lent each other concepts, such as culture, time, and space. This course examines the dialogue possibilities, and potential pitfalls of interdisciplinary research in history and anthropology.

3153 **Development of American Urban Society**  
(3-0) 3 hours credit.  
This course investigates the impact of urbanization on American society, economy, and culture. Topics may vary, but consideration will be given to urban social and spatial organization, migration, urban systems, technology, communication, and forms of individual and family adaptation.

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.  
An examination of the many developments which fundamentally transformed American society between 1914 and 1945. The course examines how these developments reverberated throughout society, affecting all aspects of American life from habits of leisure to patterns of race relations, from the role of women to the style of presidential leadership.

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.

3193 The South in American History  
(3-0) 3 hours credit.  
Topics may include 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.

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.

3243 Europe in the Nineteenth Century  
(3-0) 3 hours credit.  
The course offers a survey of European history from the Congress of Vienna until World War I. Topics may include an examination of the changing scope of international relations, industrial growth and acceleration, the conditions among social groups, and various social and political initiatives among European nations.

3253 The United States Since 1945  
(3-0) 3 hours credit.  
An examination of the social, political, economic, and cultural developments which have shaped life in the United States since World War II. Students will explore the causes and consequences of the country’s evolution into a pluralistic, suburban, post industrial super power during the last half of the twentieth century.

3263 Seventeenth- and Eighteenth-Century Europe  
(3-0) 3 hours credit.  
A survey of European history under the Ancient 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 The Early Middle Ages  
(3-0) 3 hours credit.  
This course will examine culture and society in the West (in what was to be Europe) from Late Antiquity to about 1000 A.D. It will focus on the transformation and survival of old social, political, and cultural forms at the end of the Roman Empire and the emergence of new ones in the successor states of Italy, Gaul, Germany, and Britain.

3283 Twentieth-Century Europe  
(3-0) 3 hours credit.  
Economic, social, political, and cultural change in Europe since World War I. Topics may include the formation of new political movements (such as social democracy, communism, fascism) between the wars, World War II and its effects, the postwar 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 nineteenth 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 Carlisle movement.
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.

3313 History of U.S. Relations with Latin America
(3-0) 3 hours credit.
A survey of United States relations with Latin America from the Monroe Doctrine to the present. General topics may
include the Monroe Doctrine, Manifest Destiny, gunboat diplomacy, the Good Neighbor Policy, the Cold War, and the
Alliance for Progress. Specific themes include U.S. reactions to revolutions, authoritarian regimes, and reformist
governments.

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 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.

3373 Revolution in Latin America
(3-0) 3 hours credit.
An analysis of the role 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.

3433 The Emergence of Modern America, 1877- 1914
(3-0) 3 hours credit.
An examination of social and political responses to the industrial revolution in the United States.

3443 Latinos in the United States
(3-0) 3 hours credit.
A study of Mexican Americans, Puerto Ricans, Cubans, and other Latinos in the United States. Special attention will
be given to ethnic institutions and traditions, as well as to interethnic relations and theories of assimilation and
acculturation.

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.

3493 History of San Antonio
(3-0) 3 hours credit.
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.

3513 The Economic and Social History of Europe, A.D. 200–1500
(3-0) 3 hours credit.
A survey of European economic and social history from the end of the Roman Empire to early modern times. Among the topics to be considered are the third-century crisis, the effects of the Germanic and Muslim invasions, feudalism, the recovery of Europe in the High Middle Ages, and the impact of the Black Death.

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.

3533 The Urban History of Western Civilization
(3-0) 3 hours credit.
This course examines the role of cities in the development of Western civilization and focuses on the ways cities contributed to the rise of states, the emergence of organized economic life, and the creation of a distinctive culture.

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. Topics may include emergence of new forms of weaponry, strategy, logistics, and tactics.

3553 Civil War America
(3-0) 3 hours credit.
This course explores the Civil War era in American history, beginning by tracing the causes of the Civil War, including the role that the economics of slavery played in the conflict. It studies the war itself, examining the social, cultural, and military aspects of the war. The course concludes with an examination of the attempts to reconstruct the Union in the years after the Confederate surrender.

3563 African American History to the Civil War
(3-0) 3 hours credit.
A survey of the social, economic, political, and cultural history of African Americans from the time of contact with European slave traders until the Civil War. The course will examine the process by which millions of Africans were taken from their homelands, enslaved, and transported to America, where they were gradually, and often violently, transformed into Americans. While the course will focus on the United States, it will also consider how the experiences of Blacks in America relate to the history of the peoples of the African diaspora.

3573 African American History since the Civil War
(3-0) 3 hours credit.
This course surveys the African American experience from emancipation to the present, focusing on political, economic, cultural, and social developments. The course will utilize both traditional historical methodology, with its emphasis on chronology and the examination of documents and alternative interdisciplinary methodologies, which analyze non-traditional sources such as film music, and oral interviews.

3593 Race, History, and the Making of the American South
(3-0) 3 hours credit.
This class will examine the racial histories of Americans living in the South from colonial contact to the civil rights movement. The interlocking lives of American Indians, Blacks, Hispanics, and Anglo-Americans will be examined. This class will also study of how historians have portrayed each group over time. Different “frontiers” in inter-racial histories, such as economic, religious, domestic, and sexual, will be considered.
3603 **Africa in Colonial and Post-Colonial Contexts**
(3-0) 3 hours credit.
This course focuses on political and social change in Africa after 1800, a particularly tumultuous and often violent period in African history. Working from an African perspective, students will explore events and historical processes that were often triggered by external forces. The course examines the ways in which historical themes—conquest, resistance, revolution, nationalism, identity politics—play out in an African context.

3613 **African Polities, States, and Empires**
(3-0) 3 hours credit.
Examination of political and social organization in African societies. The emphasis is on Africa prior to colonization. Topics will include regional trading networks, slavery, the range of political/governmental structures, cultural variation (including categories of gender and generation), and African relations with other parts of the world.

3623 **History of the Civil Rights Movement**
(3-0) 3 hours credit.
An examination of the struggle for civil rights in the United States from the conclusion of the Civil War to the present. While particular attention will be paid to the movement by Black southerners for equal wages, the course will also consider the struggle for civil rights conducted by other racial minorities in the United States.

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 preindustrial social and economic change.

3643 **Modern Spain**
(3-0) 3 hours credit.
A study of nineteenth- and twentieth-century Spain beginning with the origins of the Carlist movement, continuing with the rise and fall of the two Spanish Republics, the Civil War, and the advent of the Franco regime, and concluding with the restoration of the monarchy.

3703 **The Literature of the Civil War and Sectional Reconciliation**
(3-0) 3 hours credit.
An examination of the meaning and memory of the Civil War in American literature from 1865 to the present. Students will study how different authors interpreted and imagined America’s bloodiest conflict and came to terms with the issues of citizenship, nationalism, and race. Different forms of literature, including autobiographies, fiction, fables, science fiction, and poetry will be read.

3723 **The High Middle Ages and the Early Renaissance**
(3-0) 3 hours credit.
This course will examine the cultural, political, and social achievements of High Medieval Europe, with particular reference to France, Germany, and Italy. It will then focus on the great crisis of the fourteenth century and the emergence of a new, anti-medieval culture in Early Renaissance Italy, to about 1450.

3733 **Europe in the High Renaissance and Reformation**
(3-0) 3 hours credit.
This course will study the cultural, social, and political developments of Italy and Northern Europe in the time of the High Renaissance and the Reformation (c.a. 1450-1550).

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.

3753 **The Soviet Union and After**
(3-0) 3 hours credit.
The evolution of Russia from the revolution of 1917 to the present. A critical analysis of the construction and decline of a socialist society in the Soviet Union and the relationship of twentieth-century Russia to the outside world.
3763  **Russia before Peter the Great**  
(3-0) 3 hours credit.  
An introduction to the period of Russian history beginning with the founding of the Kievan State in the ninth century A.D. and ending with Peter the Great. Topics may include the Mongol conquest, the use of Muscovite patrimonial autocracy, Ivan the Terrible’s Oprichnina, the Time of Troubles, and the reattachment of Russia to Europe in the seventeenth century.

3773  **The Age of the Baroque**  
(3-0) 3 hours credit.  
This course will examine the formation of a post-Renaissance culture in Europe, with the emergence of Mannerism and the Baroque, and the rise of science. It will also study the struggles for religious and political mastery on the continent from roughly the Peace of Augsburg (1555) to the end of the Thirty Years’ War (1648), in the context of economic, social, and political change.

3783  **The Age of the Enlightenment**  
(3-0) 3 hours credit.  
This course will examine the culture of Europe from the late seventeenth to the late eighteenth centuries, focusing on the Enlightenment in its historical context.

3813  **American Political History**  
(3-0) 3 hours credit.  
A study of American political history from the eighteenth century to the present. Deals with presidents and major national developments and may consider such topics as federalism, state politics, voting behavior, party systems, and political realignment.

3823  **History of American Foreign Relations**  
(3-0) 3 hours credit.  
An examination of the emergence of the United States as a world power and its subsequent activities in world affairs. The course places particular emphasis on the domestic roots of U.S. activity and on the factors shaping American perceptions of international affairs.

3843  **Migration and History**  
(3-0) 3 hours credit.  
What has caused people to migrate as individuals and as groups? To what extent has geographical mobility been a function of economic mobilization, political transformation, social upheaval, and/or technological revolution? How has the migratory process, in turn, affected the migrants themselves, both in their place of origin, and in the host society? Specific theme, regional focus, and time period may vary according to the instructor’s choice of examples drawn from a variety of historical situations.

3853  **Public Life and Private Affairs**  
(3-0) 3 hours credit.  
The development of social distinctions between public and private has been one of the most important developments of capitalism and modernity. This course will examine how culture mediates between the public and the private, by bringing matters of the private into public view, as well as translating demands of the public for private understanding. It will consider these and other related issues on public and private affairs. The specific theme, regional focus, and time period may vary according to the instructor’s choice of examples drawn from a variety of historical situations.

3903  **Modern Japan**  
(3-0) 3 hours credit.  
An overview of Japanese history since the end of the sixteenth century. Topics may include the Tokugawa period of early modern history, the Meiji transformation of state and society, the rise of Japanese militarism leading up to the Pacific War, the American occupation, and the subsequent rebirth of Japan into a global economic giant.
3913 Late Imperial China
(3-0) 3 hours credit.
Chinese history from the late Ming (ca. 1550) to the end of the Qing dynasty in the 1911 Revolution. The course will address the nature of imperial institutions, state-society interaction, economic developments, social and cultural changes, and China’s relationship with the outside world.

3923 China in Revolution
(3-0) 3 hours credit.
A study of twentieth-century China. The course will analyze and characterize the different phases of revolutionary changes in China and examine the sources of its revolutionary impulse.

3933 Discovery of India
(3-0) 3 hours credit.
This course introduces the earliest civilizations of the Indian subcontinent, including looking at major religious traditions such as Hinduism, Buddhism, Islam, and Jainism in historical perspective. A significant focus will be on the politics of knowledge, including examining how ancient India was “discovered” by Orientalist scholars, the importance of the past in the nationalist struggle, and the contemporary significance of ancient and medieval India for understanding modern politics in the regions.

3943 Modern India, Pakistan, and Bangladesh
(3-0) 3 hours credit
In discussing modern South Asia, this course will question the extent to which South Asia is an outcome of its traditional structure (religion, caste hierarchy, joint families, village communities), and how much it is a product of global historical forces including colonialism, capitalism, feminism, and globalization. It examines politics and cultures of South Asia, with emphasis on the freedom struggle, the rise of the Congress and the Muslim League, the two-nation theory, partition and independence, the untouchables, and other contemporary issues including globalization and diaspora.

4103 Growing Up In America
(3-0) 3 hours credit.
The course examines the concepts of childhood and adolescence in their historical contexts and examines how these concepts may change in the future. This investigation will utilize perspectives from history, the social sciences, psychology, literature, and film.

4113 American Intellectual History
(3-0) 3 hours credit. Prerequisite: Completion of the Core Curriculum requirement in history and diversity.
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. Prerequisite: HIS 2003 recommended.
History of American science and technology from the eighteenth century to the present, with particular attention to the effects of social change on scientific enterprise and the influence of science on American culture.

4133 Uses and Abuses of History
(3-0) 3 hours credit.
Investigation of the status, uses, and value of history in schools and universities, and in other spheres of life. Special interests include public and private roles of scholars and intellectuals, forms of public history, literary and cinematic uses of history, public policy applications, history as social and cultural criticism, and alternative conceptions of history and historians’ work.
4203 Families in American History  
(3-0) 3 hours credit.  
An introduction to the history of family, and the roles relating to it, through a comparative social historical perspective. This course considers change and continuity in family structure and women’s social relations from the colonial era to the present.

4223 Environmental History of the United States  
(3-0) 3 hours credit. Prerequisite: HIS 2003 recommended.  
An introductory survey of the interaction of human beings and the environment in the United States from early Indian occupancy to the present. Topics may include problems of ecological change, climate, energy, population, conservation, and human ideas and uses of nature.

4403 Southern South America  
(3-0) 3 hours credit. Prerequisite: HIS 2003 recommended.  
A study of the nations of Argentina, Chile, Paraguay, and Uruguay, focusing on their legacies of exploration, conquest, colonization, and independence, with major emphases on the national period. Relationships between these nations and the United States will be examined.

4911,3 Independent Study  
1 or 3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the Department Chair 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4923 Issues in History  
(3-0) 3 hours credit. Prerequisite: Upper-class standing or consent of instructor.  
Coverage of topics of current interest in the field of history. May be repeated for credit when topics vary, but not more than 6 semester credit hours may be applied to a bachelor’s degree.

4933 Internship in History  
3 hours credit. Prerequisite: Consent of internship coordinator.  
Supervised experience relevant to history within selected community organizations. A maximum of 6 semester credit hours may be earned through Internship in History. Must be taken on a credit/no-credit basis.

4953 Special Studies in History  
(3-0) 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 may be repeated for credit when topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4973 Seminar in History  
(3-0) 3 hours credit. Prerequisites: HIS 2003 and consent of instructor.  
The opportunity for an intensive study of a selected topic. Primary emphasis on supervised research on various aspects of the topic. Enrollment limited to juniors and seniors majoring in history.

4993 Honors Thesis  
3 hours credit. Prerequisites: Enrollment limited to candidates for Honors in History during their last two semesters; completion of honors examination and consent of the Honors College. Supervised research and preparation of an honors thesis. May be repeated once with advisor’s approval.
Minor in Women and Gender Studies

The Minor in Women and Gender Studies provides students with the opportunity to examine the experience of women and men from an interdisciplinary perspective. Emphasis is placed on pursuing an understanding of women and issues of gender in diverse cultures and across time.

All students pursuing a Minor in Women and Gender Studies are required to complete 18 semester credit hours.

A. 6 semester credit hours of required courses:

- WGS 2013 Introduction to Women and Gender Studies
- WGS 4013 Research on Contemporary Policy Issues

B. 12 additional semester credit hours, in at least two disciplines other than the student’s major, selected from the following:

- AMS 3053 Topics in Women and American Culture
- ANT 3103 Social Organization
- ANT 3603 Sex, Gender, and Culture
- BBL 2013 Introduction to Chicano(a) Studies
- BBL 2023 Latino Cultural Expressions
- BBL 3023 Mexican American Culture
- BBL 3043 Psychosocial Processes in Bicultural-Bilingual Environments
- BIO 2003 Human Sex and Reproduction
- CRJ 4313 Minorities and Women in the Criminal Justice System
- ENG 3133 Women and Literature
- HIS 3043 History of Women in the U.S.: Pre-Columbus to 1890
- HIS 3053 History of Women in the U.S.: Since 1890
- HTH 4523 Understanding Human Sexuality
- IDS 2113 Society and Social Issues
- POL 3163 Introduction to Feminist Theory
- POL 3173 Women in Western Political Theory
- PSY 3303 Psychological Perspectives on Gender
- PSY 4193 Relationships
- SOC 3163 Marriage and the Family
- SOC 3283 Poverty
- SOC 3293 Gender Roles
- SPN 3343 Hispanic Women’s Literature
- WGS 4913 Independent Study in Women and Gender Studies
- WGS 4933 Internship in Women and Gender Studies

Note: Other courses that pay explicit attention to women and gender issues can also be considered.

To declare a Minor in Women and Gender Studies, obtain advice, obtain lists of relevant courses, or seek approval of substitutions for course requirements, students should consult the undergraduate advisor in the College of Liberal and Fine Arts Advising Center.

COURSE DESCRIPTIONS
WOMEN AND GENDER STUDIES
(WGS)

2013 Introduction to Women and Gender Studies
(3-0) 3 hours credit.
This course is an introduction to the study of women and gender using interdisciplinary and cross-cultural approaches. Designed to introduce students to the intellectual frameworks that shape thoughts about women and men. Topics may include sexuality, violence against women, feminism, and diversity in terms of race, ethnicity, age, and sexual orientation.
4013  Research on Contemporary Policy Issues  
(3-0) 3 hours credit.  
This course will allow the student to participate in directed research on a selected contemporary policy issue of 
relevance to women and/or gender. Students will research the issue and work together to formulate a policy 
recommendation. Women and gender studies minors are encouraged to recommend issues for examination to the 
women and gender studies advisor.

4913  Independent Study in Women and Gender Studies  
3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the 
Department Chair and Dean of the College with which the instructor is affiliated. 
Independent reading, research, discussion, and/or writing under the direction of a faculty member. A maximum 
of 3 semester credit hours of independent study in women and gender studies may be applied to the Minor in 
Women and Gender Studies.

4933  Internship in Women and Gender Studies  
3 hours credit. Prerequisite: Approval of internship coordinator. 
Supervised experience relevant to women and gender issues may be earned within selected community 
organizations. A maximum of 3 semester credit hours may be applied to the Minor in Women and Gender 
Studies. Must be taken on a credit/no-credit basis.
DEPARTMENT OF MODERN LANGUAGES AND LITERATURES

The Department of Modern Languages and Literatures offers majors in French, German, and Spanish designed to develop the student's specialized knowledge of culture, literature, and language. The department also offers minors in French, German, Russian, Spanish, Comparative Literature, Foreign Languages, and Linguistics. The minors give students the opportunity to refine language skills and acquire knowledge of a foreign culture and/or literature. Skills-development courses, which facilitate speaking, reading, writing, and understanding of a foreign language, are offered in these languages as well as in Italian and Japanese. Courses in comparative studies in the humanities relate literatures to the other arts and general currents of culture and humanistic thought, while coursework in linguistics focuses on general concepts of linguistic structure and meaning and relates language development to other areas of human understanding. Additional study abroad is also encouraged (See study abroad options under Course Descriptions-Foreign Languages).

DEPARTMENT HONORS

A student whose grade point average in courses taken at UTSA is at least 3.0, whose grade point average in upper-division courses in one of the fields offered as a major in the department is at least 3.5, and who has completed 18 semester credit hours at the upper-division level in the major (24 hours for Spanish) may petition the undergraduate faculty advisor to enroll in the appropriate honors course (SPN, FRN, or GER 4993 Honors Research). If the student maintains the minimum grade point averages upon completion of the course, the Department Honors Committee will evaluate the project the student completed in the honors course and determine whether he or she will be awarded Department Honors.

Bachelor of Arts Degree in French

The minimum number of semester credit hours required for the Bachelor of Arts degree in French, including the hours in the Core Curriculum requirements, is 120. Thirty-nine of the total semester credit hours required for the degree must be at the upper-division level. Students seeking teacher certification should consult the College of Education and Human Development Advising and Certification Center for information.

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Arts degree in French must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition
ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | **Mathematics** (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
**Science** (6 semester credit hours)  
Three hours from Level One and three hours from Level Two will satisfy this core requirement. |
Degree Requirements

A. 24 semester credit hours in the major, all of which must be at the upper-division level, as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRN 3023 Oral Communication and Composition</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FRN 3413 French Literature and Culture until 1800</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FRN 3423 French Literature and Culture since 1800</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>15 additional semester credit hours in French chosen in consultation with the student’s advisor</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

B. 12 semester credit hours of support work, as follows:

1. 6 semester credit hours selected from among the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSH 1103 Literary Masterpieces of Western Culture I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CSH 1113 Literary Masterpieces of Western Culture II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CSH 2313 Introduction to Literary Studies</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LNG 3813 Introduction to Linguistics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LNG 3833 Sociology of Language</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

2. 6 additional semester credit hours outside the major in another foreign language at the upper-division level and/or a related area, including other literature, culture, or linguistics courses chosen in consultation with the student’s advisor

C. 42 semester credit hours of electives
Minor in French

All students pursuing the Minor in French must complete 18 semester credit hours.

A. 9 semester credit hours of required language skill courses:

FRN 2013 Intermediate French I
FRN 2023 Intermediate French II
FRN 3023 Oral Communication and Composition

B. 9 additional semester credit hours of French courses, 6 of which must be at the upper-division level, chosen in consultation with the advisor for the Minor in French

COURSE DESCRIPTIONS
FRENCH
(FRN)

1014 Elementary French I
(3-2) 4 hours credit.
Fundamentals of French offering the opportunity to develop listening, speaking, reading, and writing skills. Emphasis on listening and speaking. Introduction to French culture. [TCCN: FREN 1411.]

1024 Elementary French II
(3-2) 4 hours credit. Prerequisite: FRN 1014, the equivalent, or an appropriate placement test score.
Fundamentals of French offering the opportunity to develop listening, speaking, reading, and writing skills. Further study of French culture. [TCCN: FREN 1412.]

2013 Intermediate French I
(3-1) 3 hours credit. Prerequisite: FRN 1024, the equivalent, or an appropriate placement test score.
Continued opportunity to develop listening, reading, speaking, and writing skills. Grammar review and further study of French culture. [TCCN: FREN 2311.]

2023 Intermediate French II
(3-1) 3 hours credit. Prerequisite: FRN 2013, the equivalent, or an appropriate placement test score.
Continued opportunity to develop listening, reading, speaking, and writing skills. Grammar review and further study of French culture. [TCCN: FREN 2312.]

2333 French Literature in English Translation
(3-0) 3 hours credit.
Major works of French literature across time, genres, and movements. May not be applied to a major in French. (Formerly FRN 3333. Credit cannot be earned for both FRN 2333 and FRN 3333.)

3023 Oral Communication and Composition
(3-0) 3 hours credit. Prerequisite: FRN 2023 or consent of instructor.
Conversation correlated with readings, reports, and expository writing, aimed at increasing oral and written fluency and accuracy. Vocabulary expansion and selective grammar review. May be repeated once for credit.

3053 Business French
(3-0) 3 hours credit. Prerequisite: FRN 2023 or consent of instructor.
Introduction to the basic context of the French economy and business world, with emphasis on development of 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.
3413  **French Literature and Culture until 1800**  
(3-0) 3 hours credit. Prerequisite: FRN 2023 or consent of instructor.  
Selections from French literature studied as reflections and interpretations of central movements in French  
literary and cultural history until 1800. Introduction to concepts of literary style, genre, and period, with  
emphasis on poetry and drama.

3423  **French Literature and Culture since 1800**  
(3-0) 3 hours credit. Prerequisite: FRN 2023 or consent of instructor.  
Selections from French literature studied as reflections and interpretations of central movements in French  
literary and cultural history since 1800. Introduction to concepts of literary style, genre, and period, with  
emphasis on poetry and the novel.

3433  **French Civilization**  
(3-0) 3 hours credit. Prerequisite: FRN 2023 or consent of instructor.  
A chronological survey of French history, society, ideas, and arts, with emphasis on reading and analysis of  
materials from primary sources such as historical documents, memoirs, chronicles, philosophical and scientific  
discourses, and literature.

3613  **Contemporary French Culture and Society**  
(3-0) 3 hours credit. Prerequisite: FRN 2023 or consent of instructor.  
Social, political, economic, and cultural aspects of contemporary France, with emphasis on reading and analysis  
of materials from primary sources such as official documents, informational publications, newspapers,  
magazines, radio, and television. Attention to current national and regional problems and conflicts.

4953  **Special Studies in French**  
(3-0) 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 may be repeated for credit when the topics vary, but not more than 6  
semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4993  **Honors Research**  
3 hours credit. Prerequisite: Consent of the undergraduate advisor.  
Supervised research and preparation of an honors thesis. May be repeated once for credit, with approval.

**Bachelor of Arts Degree in German**

The minimum number of semester credit hours required for the Bachelor of Arts degree in German, including the hours in  
the Core Curriculum requirements, is 120. Thirty-nine of the total semester credit hours required for the degree must be at  
the upper-division level. Students seeking teacher certification should consult the College of Education and Human  
Development Advising and Certification Center for information.

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are  
listed below.

**Core Curriculum requirements:** Students seeking the Bachelor of Arts degree in German must fulfill University Core  
Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree  
requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then  
students will need to take additional courses in order to meet the minimum number of semester credit hours required for  
this degree. For a complete listing of courses that satisfy Core Curriculum requirements see pages 9-13 of this catalog.
# Degree Requirements

A. 24 semester credit hours in the major, all of which must be at the upper-division level, as follows:

<table>
<thead>
<tr>
<th>Core Course</th>
<th>Credit Hours</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>GER 3023</td>
<td>3</td>
<td>Oral Communication and Composition</td>
</tr>
<tr>
<td>GER 3413</td>
<td>3</td>
<td>German Literature and Culture I: Middle Ages to 1700</td>
</tr>
<tr>
<td>GER 3423</td>
<td>3</td>
<td>German Literature and Culture II: 1700 to the Present</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Additional semester credit hours in German chosen in consultation with the student’s advisor</td>
</tr>
</tbody>
</table>

B. 12 semester credit hours of support work, as follows:

1. At least 6 semester credit hours selected from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
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<td>3</td>
<td>Introduction to Linguistics</td>
</tr>
<tr>
<td></td>
<td>or</td>
<td>Sociology of Language</td>
</tr>
<tr>
<td>LNG 3833</td>
<td>3</td>
<td>Sociology of Language</td>
</tr>
</tbody>
</table>

## Core Curriculum Requirements

### Rhetoric (6 semester credit hours)

All students must take the following six hours to meet this core requirement:

- ENG 1013 Freshman Composition
- ENG 1023 Discourse across the Disciplines

### Domain I: Mathematics and Science (3 semester credit hours)

- Mathematics
- Science

Any three hours listed under this section in the list of core courses will satisfy this core requirement.

### Domain II: Society and Culture (6 semester credit hours)

- United States History and Diversity
- Political Studies
- Social and Behavioral Sciences
- Economics

Any six hours listed under this section in the list of core courses will satisfy this core requirement.

### Domain III: Literature and the Arts (3 semester credit hours)

- Literature
- The Arts

Any three hours listed under this section in the list of core courses will satisfy this core requirement.

### Domain IV: Interdisciplinary Studies (3 semester credit hours)

GER 2013 or GER 2023 will satisfy this core requirement.
2. Hours remaining to make the total of 12 selected from section B.1 or courses in related areas in consultation with the student’s advisor in the major

C. 42 semester credit hours of electives

**Minor in German**

All students pursuing the Minor in German must complete 18 semester credit hours.

A. 9 semester credit hours of required language skill courses:
   
   1. GER 2013 Intermediate German I  
      GER 2023 Intermediate German II  
   2. GER 3023 Oral Communication and Composition  
      or
      GER 3053 Advanced German Grammar and Stylistics

B. 9 additional semester credit hours of German courses, 6 of which must be at the upper-division level, chosen in consultation with the advisor for the Minor in German

<table>
<thead>
<tr>
<th>COURSE DESCRIPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GERMAN</td>
</tr>
<tr>
<td>(GER)</td>
</tr>
</tbody>
</table>

**1014** Elementary German I  
(3-2) 4 hours credit.  
Fundamentals of German offering the opportunity to develop listening, reading, speaking, and writing skills. Introduction to German culture. [TCCN: GERM 1411.]

**1024** Elementary German II  
(3-2) 4 hours credit. Prerequisite: GER 1014, the equivalent, or an appropriate placement test score.  
Fundamentals of German offering the opportunity to further develop abilities in listening, reading, speaking, and writing skills. Further exposure to German culture. [TCCN: GERM 1412.]

**2013** Intermediate German I  
(3-1) 3 hours credit. Prerequisite: GER 1024, the equivalent, an appropriate placement test score, or consent of instructor.  
Continued opportunity to develop listening, reading, speaking, and writing skills. Continued exposure to German culture. [TCCN: GERM 2311.]

**2023** Intermediate German II  
(3-1) 3 hours credit. Prerequisite: GER 2013, the equivalent, or an appropriate placement test score.  
Continued opportunity to develop listening, reading, speaking, and writing skills. Continued exposure to German culture. [TCCN: GERM 2312.]

**2333** German Literature in English Translation  
(3-0) 3 hours credit. 
Major works of German literature across time, genres, and movements. May not be applied to a major in German. (Formerly GER 3333. Credit cannot be earned for both GER 2333 and GER 3333.)
3023  **Oral Communication and Composition**  
(3-0) 3 hours credit. Prerequisite: GER 2023 or consent of instructor.  
Conversation correlated with contemporary readings in everyday situations. Practical vocabulary in reading, speaking, and writing is stressed. Oral reports and expository writing are aimed at increasing fluency through vocabulary expansion and selective grammar review. Attention is given to individual students’ pronunciation, word choice, and syntax. 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 given to advanced grammatical categories and stylistic differentiation of literary and nonliterary language. Application of language skills in relevant situations is stressed. Readings deal with contemporary social, economic, political, intellectual, and/or artistic interests and issues. May be repeated once for credit when topics vary.

3353  **Critical Perspectives on Contemporary German Culture**  
(3-0) 3 hours credit. Prerequisite: GER 2023 or consent of instructor.  
Systematic development of speaking and writing skills through understanding and analyzing forms of culture production in contemporary German-speaking societies (e.g., German TV, working with German online resources).

3413  **German Literature and Culture I: Middle Ages to 1700**  
(3-0) 3 hours credit. Prerequisite: GER 2023 or consent of instructor.  
Selected works from the medieval period to 1700 are studied as examples of central movements 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 2023 or consent of instructor.  
Selected works from 1700 to the present are studied as examples of central movements 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**  
(3-0) 3 hours credit. Prerequisite: GER 3413, GER 3423, or consent of instructor.  
Focus on a specific period of German literature, from the medieval period through the twentieth century. Selected texts are studied as examples of representative movements in German literary history. May be repeated for credit when topics vary.

4013  **Genre Studies**  
(3-0) 3 hours credit. Prerequisite: GER 3413, GER 3423, or consent of instructor.  
Study of a single genre or subgenre in German, 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, GER 3423, or consent of instructor.  
Study of one or several German literary or intellectual figures, such as Luther, Goethe, Nietzsche, or Brecht. May be repeated for credit when topics vary.

4213  **German Studies: Culture**  
(3-0) 3 hours credit. Prerequisite: GER 3413, GER 3423, or consent of instructor.  
Focuses on selected topics of cultural history, such as Vienna 1890-1914, Expressionism, or contemporary cultural/political developments. May be repeated when topics vary.
4333  **Studies in German Linguistics**  
(3-0) 3 hours credit. Prerequisite: GER 2023 or consent of instructor.  
Focuses on a selected topic of linguistics. 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, the  
Department Chair, 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 semester credit hours of independent study, regardless of discipline, will  
apply to a bachelor’s degree. No more than 6 hours of GER 4913 and/or GER 4993 may be applied to the major  
in German.

4933  **Internship in German**  
3 hours credit. Prerequisite: Permission of Department Chair.  
Supervised experience in a setting that provides the opportunity to integrate theory and practice in language  
usage. May be repeated once for credit.

4953  **Special Studies in German**  
(3-0) 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 may be repeated for credit when the topics vary, but not more than 6  
semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4993  **Honors Research**  
3 hours credit. Prerequisite: Consent of the undergraduate advisor.  
Supervised research and preparation of an honors thesis. May be repeated once for credit, with approval. No  
more than 6 semester credit hours of GER 4993 and/or GER 4913 may be applied to the major in German.

**Bachelor of Arts Degree in Spanish**

The minimum number of semester credit hours required for this degree, including the hours in the Core Curriculum  
requirements, is 120. Thirty-nine of the total semester credit hours required for the degree must be at the upper-division  
level.

Prerequisites for most upper-division Spanish courses may include SPN 3063, the appropriate proficiency or placement  
test score, or consent of instructor.

Students seeking teacher certification should consult the College of Education and Human Development Advising and  
Certification Center for information.

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are  
listed below.

**Core Curriculum requirements:** Students seeking the Bachelor of Arts degree in Spanish must fulfill University Core  
Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree  
requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then  
students will need to take additional courses in order to meet the minimum number of semester credit hours required for  
this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

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<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
Degree Requirements

A. 39 semester credit hours in the major, all of which must be at the upper-division level, as follows:

1. 12 semester credit hours of required language courses (recommended for early completion):
   - SPN 3033 Oral Communication Skills
   - or
   - SPN 4033 Advanced Oral Communication Skills
     (with placement score of 2+ or above)
   - SPN 3043 Advanced Reading
   - SPN 3063 Grammar and Composition
   - SPN 3073 Advanced Grammar and Composition

2. 3 semester credit hours selected from the following:
   - SPN 3013 Spanish Phonetics and Pronunciation
   - SPN 3113 Linguistic Structures of Spanish

3. 9 semester credit hours selected from the following:
   - SPN 3413 The Literature of Spain from the Middle Ages to 1700
   - SPN 3423 The Literature of Spain from 1700 to the present
4. 6 semester credit hours as follows:
   
   SPN 3613  Spanish Culture and Civilization
   SPN 3623  Latin American Culture and Civilization

5. 9 semester credit hours of Spanish electives, 3 of which must be at the 4000 level

B. 12 additional semester credit hours of coursework not taught in Spanish, distributed in the following manner:

1. 3 hours in either Comparative Studies in the Humanities (CSH, except CSH 1203) or Linguistics (LNG).

2. The remaining 9 hours in a single area or a combination, selected from the following in consultation with the undergraduate advisor: literature, culture, linguistics, foreign language (FL: translation, cross-cultural communication, study abroad etc.), another foreign language, history, anthropology, art, or other related areas.

C. 27 semester credit hours of electives

**Minor in Spanish**

All students pursuing the Minor in Spanish must complete 18 semester credit hours.

A. 15 semester credit hours of required language skill courses:

   SPN 2023  Intermediate Spanish II
   or
   SPN 2006  Intermediate Spanish-Accelerated
   SPN 2103  Oral and Written Expression
   SPN 3033  Oral Communication Skills
   or
   SPN 4033  Advanced Oral Communication Skills
               (with placement score of 2+ or above)
   SPN 3043  Advanced Reading
   SPN 3063  Grammar and Composition

B. 3 semester credit hours in other upper-division Spanish chosen in consultation with the advisor

**COURSE DESCRIPTIONS**

**SPANISH**

**SPN 1008**  Elementary Spanish-Accelerated

(6-4) 8 hours credit.

A one-semester course offering the opportunity to develop listening, speaking, reading, and writing skills. Emphasis on listening and speaking. Introduction to Hispanic culture. (Credit for SPN 1008 is equivalent to credit for both SPN 1014 and SPN 1024.)
1014 Elementary Spanish I
(3-2) 4 hours credit.
Fundamentals of Spanish, offering the opportunity to develop listening, speaking, reading, and writing skills. Emphasis on listening and speaking. Introduction to Hispanic culture. [TCCN: SPAN 1411.]

1024 Elementary Spanish II
(3-2) 4 hours credit. Prerequisite: SPN 1014, the equivalent, or an appropriate placement test score.
Fundamentals of Spanish offering the opportunity to develop listening, speaking, reading, and writing skills. Emphasis on listening and speaking. Further study of Hispanic culture. [TCCN: SPAN 1412.]

2003 Spanish for Elementary Education
(3-1) 3 hours credit. Prerequisite: 4-8 hours at the 1000 level or the equivalent, appropriate placement score, or consent of instructor.
Intermediate Spanish, emphasis on listening, speaking, reading and writing, with grammar and vocabulary to support language use. Hispanic culture focus. Task-based instruction focusing on basic face-to-face interactions with Spanish-speaking parents and community, classroom interaction with Spanish-speaking students, and other relevant tasks.

2006 Intermediate Spanish-Accelerated
(6-2) 6 hours credit. Prerequisite: SPN 1008, 1024, the equivalent, or an appropriate placement test score.
A one-semester course offering continued opportunity to develop listening, speaking, reading, and writing skills. Includes grammar and further study of Hispanic culture. (Credit for SPN 2006 is equivalent to credit for both SPN 2013 and SPN 2023.)

2013 Intermediate Spanish I
(3-1) 3 hours credit. Prerequisite: SPN 1008, 1024, the equivalent, or an appropriate placement test score.
Continued opportunity to develop listening, speaking, reading, and writing skills. Grammar and further study of Hispanic culture. [TCCN: SPAN 2311.]

2023 Intermediate Spanish II
(3-1) 3 hours credit. Prerequisite: SPN 2013, the equivalent, or an appropriate placement test score.
Continued opportunity to develop listening, speaking, reading, and writing skills. Grammar review and further study of Hispanic culture. [TCCN: SPAN 2312.]

2103 Oral and Written Expression
(3-1) 3 hours credit. Prerequisite: SPN 2023, the equivalent, or an appropriate placement test score.
Conversation, reading, and grammar review toward building literacy skills. Opportunities for composition and oral communication for a variety of situations and topics.

2333 Hispanic Literature in English Translation
(3-0) 3 hours credit. Prerequisite: ENG 1013 or the equivalent.
Major works in Hispanic literatures: themes, genres, and movements. May not be applied to a major in Spanish. (Formerly SPN 3333. Credit cannot be earned for both SPN 2333 and SPN 3333.)

2513 Spanish for Special Purposes
(3-1) 3 hours credit. Prerequisite: SPN 2013, the equivalent, or an appropriate placement test score.
Foreign language communication and cross-cultural skills relevant to one or more of the following areas: business, health care, law, education, science, southwest Spanish, Hispanic literature, or technology. May be repeated for credit when topics vary. [TCCN: SPAN 2316.]

2523 Hispanic Culture and Communication
(3-1) 3 hours credit. Prerequisite: SPN 2013, the equivalent, or an appropriate placement test score.
A brief review of history, geography, worldview, and customs common in Latin America and Spain, with particular emphasis on Mexico and U.S. Hispanic culture. Use of some target culture source materials. Continued opportunity to develop oral and written communication in Spanish and to understand mainstream U.S. Hispanic cross-cultural communication. [TCCN: SPAN 2324.]
3013 Spanish Phonetics and Pronunciation
(3-1) 3 hours credit. Prerequisite: SPN 3063 or consent of instructor.
Offers the opportunity for study of the sound system of Latin American Spanish. Activities may include
pronunciation exercises, exercises in sound discrimination and transcription, and articulatory description of
various dialects of Spanish.

3023 Creative Writing
(3-0) 3 hours credit. Prerequisite: SPN 2023 or the equivalent, or consent of instructor.
Writing in various genres. Form, style and techniques of creative writing. May be repeated for credit when topics
vary.

3033 Oral Communication Skills
(3-0) 3 hours credit. Prerequisite: SPN 2023 or the equivalent, or consent of instructor.
Offers the opportunity for further development of speaking skills through oral activities directed at the Advanced
and Superior Level on the ACTFL-ETS proficiency scale. May be repeated once for credit if exit proficiency
score is less than 2+.

3043 Advanced Reading
(3-0) 3 hours credit. Prerequisite: SPN 3063 or consent of instructor.
Extensive reading practice, comprehension strategies, and vocabulary building with material from a variety of
disciplines and different types of texts.

3063 Grammar and Composition
(3-0) 3 hours credit. Prerequisite: SPN 2023 or the equivalent.
Extensive review of fundamental grammar with vocabulary building. Development of writing skills and style
through activities directed at the advanced level on the ACTFL-ETS proficiency scale. Consideration of usage
and differences between written and spoken language.

3073 Advanced Grammar and Composition
(3-0) 3 hours credit. Prerequisite: SPN 3063 or the equivalent.
Extensive review of complex grammatical structures with vocabulary building. Further development of writing
skills and style through activities directed at the superior level on the ACTFL-ETS proficiency scale.
Consideration of usage and differences between written and spoken language.

3113 Linguistic Structures of Spanish
(3-0) 3 hours credit. Prerequisite: SPN 3063 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 word formation, syntax, and semantics.

3153 Spanish for the Business/Management Fields
(3-0) 3 hours credit. Prerequisite: SPN 2023 or the equivalent.
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, and banking. Intended for students with some background in Spanish. May be repeated once for
credit when topics vary.

3343 Hispanic Women’s Literature
(3-0) 3 hours credit. Prerequisite: SPN 3043 or consent of instructor.
Readings in Spanish from women writers. Provides the opportunity to explore women’s literature from various
national perspectives.

3413 The Literature of Spain from the Middle Ages to 1700
(3-0) 3 hours credit. Prerequisite: SPN 3043 or consent of instructor.
Spanish literature from the Middle Ages to 1700. Readings of selections and complete works. Practice in critical
analysis through papers and examinations. (Credit cannot be earned for both SPN 3413 and SPN 3313.)
3423 **The Literature of Spain from 1700 to the Present**  
(3-0) 3 hours credit. Prerequisite: SPN 3043 or consent of instructor.  
Spanish literature from 1700 to the present. Readings of selections and complete works. Practice in critical analysis through papers and examinations. (Credit cannot be earned for both SPN 3423 and SPN 3313.)

3463 **Latin American Literature to Modernism**  
(3-0) 3 hours credit. Prerequisite: SPN 3043 or consent of instructor.  
Latin American literature from pre-Columbian times to Modernism. Practice in critical analysis through papers and examinations. (Credit cannot be earned for both SPN 3463 and SPN 3323.)

3473 **Latin American Literature since Modernism**  
(3-0) 3 hours credit. Prerequisite: SPN 3043 or consent of instructor.  
Latin American literature from Modernism to the present. Practice in critical analysis through papers and examinations. (Credit cannot be earned for both SPN 3473 and SPN 3323.)

3493 **Mexican American Literature**  
(3-0) 3 hours credit. Prerequisite: SPN 2103, SPN 3063, or consent of instructor.  
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: history, cultural expression, myths, values, and worldview.

3623 **Latin American Culture and Civilization**  
(3-0) 3 hours credit. Prerequisite: SPN 3043.  
The cultural life of the respective geographic regions and social strata of Latin 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 Latin America**  
(3-0) 3 hours credit. Prerequisite: SPN 3043.  
Problems and conflicts determining the cultural development of contemporary Latin America. Ethnic, social, political, economic, and cultural characteristics. Intellectual currents and the role of intellectual leaders in forming the cultural expression of Latin America.

3673 **Hispanic Cultural Systems**  
(3-0) 3 hours credit. Prerequisite: SPN 3043.  
Aspects of everyday culture that affect interaction with native speakers of Spanish in the Hispanic world. Topics may include social norms, customs, language styles, or religion.

4033 **Advanced Oral Communication Skills**  
(3-0) 3 hours credit. Prerequisite: SPN 3033 or a 2+ on the Oral Proficiency Interview Test.  
4103 **Composition Workshop**  
(3-0) 3 hours credit. Prerequisite: SPN 3063 or consent of instructor. 
Principles and methods of clear, effective writing. Extensive practice in writing and rewriting, with particular attention to stylistics. Diagnostic grammar as needed, tailored to the individual or small group. May be repeated once for credit.

4113 **Topics in Spanish Linguistics**  
(3-0) 3 hours credit. Prerequisite: SPN 3113 or consent of instructor. 
Advanced study and applications of topics in Spanish linguistics. May include one or more of the following: phonology, morphology, syntax, semantics, dialectology, language variability, and history of Spanish.

4123 **The Spanish of the Southwest**  
(3-0) 3 hours credit. Prerequisite: SPN 3013, SPN 3113, or consent of instructor. 
The analysis of the Spanish language as used by Mexican Americans in the southwestern United States, from a linguistic and sociolinguistic perspective. Particular attention given to the Spanish spoken in Texas.

4213 **Classic Spanish Literature**  
(3-0) 3 hours credit. Prerequisite: An upper-division course in literature taught 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 for credit when topics vary.

4223 **Twentieth-Century Spanish Literature**  
(3-0) 3 hours credit. Prerequisite: An upper-division course in literature taught 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 Literature**  
(3-0) 3 hours credit. Prerequisite: An upper-division course in literature taught in Spanish or consent of instructor. 
An intensive study of literature from its eighteenth-century ideological and vital roots through the Modernist movement. May be repeated for credit when topics vary.

4243 **Twentieth-Century Latin American Literature**  
(3-0) 3 hours credit. Prerequisite: An upper-division course in literature taught in Spanish or consent of instructor. 
An intensive study of Latin American prose, poetry, and/or drama from Modernism to the present. May be repeated for credit when topics vary.

4323 **Cervantes’ Don Quijote**  
(3-0) 3 hours credit. Prerequisite: An upper-division course in literature taught 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 Latin America**  
(3-0) 3 hours credit. Prerequisite: An upper-division course in literature taught in Spanish or consent of instructor. 
Representative works from the national literatures of Latin America. May be repeated for credit when topics vary.

4513 **Hispanic Film**  
(3-0) 3 hours credit. Prerequisite: SPN 3043 or consent of instructor. 
Focus on representative Spanish, Latin American and/or U.S. Hispanic films and directors. Film as art and cultural expression. 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, the Department Chair 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree. No more than 6 hours of SPN 4913 and/or SPN 4993 may be applied to the major in Spanish.

4933 Internship in Spanish
3 hours credit. Prerequisite: Permission of Department Chair.
Supervised experience in a setting that provides the opportunity to integrate theory and practice in language usage. May be repeated once for credit.

4953 Special Studies in Spanish
(3-0) 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 may be repeated for credit when the topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4993 Honors Research
3 hours credit. Prerequisite: Consent of the undergraduate advisor.
Supervised research and preparation of an honors thesis. May be repeated once for credit with approval. No more than 6 semester credit hours of SPN 4993 and/or SPN 4913 may be applied to the major in Spanish.

Minor in Comparative Literature
The Minor in Comparative Literature offers an opportunity to study texts in a manner that transcends national and linguistic boundaries. Comparative literature enables students, through their majors, to develop a solid grounding in one particular tradition (e.g., English, Spanish, French) or one discipline (e.g., history, music) while also embracing a broader perspective. A student minoring in comparative literature may wish to pursue graduate work in comparative literature or in a specific national literary tradition or to pursue a career in translation, teaching, publishing, or writing. A Minor in Comparative Literature discourages parochialism and fosters the sophistication that a liberal arts degree is designed to recognize.

All students pursuing the Minor in Comparative Literature must complete 18 semester credit hours.

A. 12 semester credit hours of upper-division literature courses, selected from at least two of the following disciplines: classics, English, French, German, Italian, Russian, or Spanish

B. 6 semester credit hours of upper-division courses in comparative studies in the humanities:
   1. CSH 3013 Theory and Practice of Comparative Literature (3 hours)
   2. 3 semester credit hours of an additional upper-division CSH course

COURSE DESCRIPTIONS

COMPARATIVE STUDIES IN THE HUMANITIES
(CSH)

1103 Literary Masterpieces of Western Culture I
(3-0) 3 hours credit.
Representative masterworks of Western literature in translation. An examination of major texts from antiquity to the Renaissance that have shaped and expressed Western cultural traditions. Situation of literary works in the context of the development of civilization.
1113  **Literary Masterpieces of Western Culture II**  
(3-0) 3 hours credit.  
Representative masterworks of Western literature in translation. An examination of major texts from the Renaissance to the present that have shaped and expressed Western 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 used as support work for the Spanish major.

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 are from English language or translated materials. May be repeated for credit when topics vary. [TCCN: HUMA 2323.]

2113  **The Foreign Film**  
(3-0) 3 hours credit.  
An introduction to film as art and cultural expression. Emphasis on cinematic techniques, national traditions, genres, and the distinctive features of film as a humanistic medium. Films drawn from Latin America, Asia, Africa, and/or Europe. May be repeated for credit when topics vary.

2313  **Introduction to Literary Studies**  
(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.  
Offers the opportunity to develop an awareness of literature and the skills with which to approach and understand it. Examination of individual national traditions and the interrelationship of all literary traditions. Emphasis on the nature of genre, period, and style. (Formerly CSH 3313. Credit cannot be earned for both CSH 2313 and CSH 3313).

3013  **Theory and Practice of Comparative Literature**  
(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.  
Introduction to history and nature of the discipline. Issues of translation and transmission, periods and movements, genres and forms, motifs and types, and literature and the other arts.

3813  **Topics in Comparative Studies in the Humanities**  
(3-0) 3 hours credit. Prerequisite: ENG 1023 or the equivalent.  
Comparative and/or interdisciplinary investigation of humanistic fields of study, including literature, culture, film, and other arts. Topics may include study of a genre, period, or motif, comparison of authors or directors. May be repeated for credit when topics vary.
Minor in Foreign Languages

The Minor in Foreign Languages offers an opportunity to increase proficiency in reading, writing, speaking, and listening skills in a foreign language. The minor will lead to the acquisition of metalinguistic skills and an enhanced understanding of the target culture and its orientation to world communication.

All students pursuing the Minor in Foreign Languages must complete 18 semester credit hours.

A. 6 semester credit hours of language skill courses in the same language at the 2000 level or above

B. 12 additional semester credit hours of language and linguistics courses (including FL) in the department, 9 of which must be at the upper-division level

COURSE DESCRIPTIONS
FOREIGN LANGUAGES
(FL)

1034 Beginning Language Study Abroad
4 hours credit. Prerequisite: Consent of instructor.
Opportunity to begin developing oral and written communication skills in the target language, along with enhanced comprehension skills in listening and reading. Linguistic and cultural immersion. May be repeated up to 8 semester credit hours in each language. Offered in Spanish, German, French, Italian, Japanese, and Russian.

1044 Individualized Instruction in Basic Language
4 hours credit. Prerequisite: Consent of instructor.
Opportunity to develop basic oral and written communication skills in the target language, along with enhanced comprehension skills in listening and reading. Generally restricted to special projects or languages not regularly offered as organized classes. May be repeated up to 8 semester credit hours in each language.

2023 Culture and Communication in a Foreign Language
(3-0) 3 hours credit. A brief overview of history, geography, worldview, and customs common in the target culture. Use of some target culture materials. Opportunity to develop basic oral and written communication skills in the language. May be repeated for credit when language varies.

2033 Intermediate Language Study Abroad
3 hours credit. Prerequisites: Consent of instructor and 1008, 1024, or the equivalent in the selected foreign language.
Opportunity to develop intermediate-level oral and written communication skills in the target language, along with increased comprehension skills in listening and reading. Linguistic and cultural immersion. May be repeated up to 6 semester credit hours in each language. Offered in Spanish, German, French, Italian, Japanese, and Russian.

2043 Individualized Instruction in Intermediate-Level Language
3 hours credit. Prerequisites: Consent of instructor and 1008, 1024, or the equivalent in the selected foreign language.
Opportunity to develop intermediate-level oral and written communication skills in the target language, along with increased comprehension skills in listening and reading. Generally restricted to special projects or languages not regularly offered as organized classes. May be repeated up to 6 semester credit hours in each language.

3003 Introduction to Translation
(3-0) 3 hours credit. Prerequisites: At least four courses of any single foreign language.
Principles of translation with practice in translating brief documents of a general nature. May be repeated for credit when language varies. (Formerly FL 2013. Credit cannot be earned for both FL 3003 and FL 2013.)

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 language-related and cultural issues involved in translation and interpretation. Practice in translating documents from selected professional areas: business, health care, law, technology, or the arts. May be repeated for credit when topics/languages vary.
3033  **Advanced Language Study Abroad**  
3 hours credit. Prerequisites: Consent of instructor and 2006, 2023, or the equivalent in the selected foreign language.  
Opportunity to develop advanced-level oral and written communication skills in the target language, along with enhanced comprehension skills in listening and reading. Linguistic and cultural immersion. May be repeated up to 6 semester credit hours in each language. Offered in Spanish, German, French, Italian, Japanese, and Russian.

3043  **Individualized Instruction in Advanced-Level Language**  
3 hours credit. Prerequisites: Consent of instructor and 2006, 2023, or the equivalent in the selected foreign language.  
Opportunity to develop advanced-level oral and written communication skills in the target language, along with enhanced comprehension skills in listening and reading. Generally restricted to special projects or languages not regularly offered as organized classes. May be repeated up to 6 semester credit hours in each language.

4013  **Cross-Cultural Communication and Foreign Languages**  
(3-0) 3 hours credit.  
Study of cross-cultural communication research in specific language communities and its application to effective interaction with speakers of a variety of foreign languages. Selected applications and comparisons according to sociolinguistic norms, semantic variation, and nonverbal language, relevant to the most numerous language communities in the United States and abroad. Material from psychology, sociology, communication, and other related fields.

4243  **Foreign Language Instruction**  
(3-0) 3 hours credit. Prerequisite: 2023 or an equivalent in a foreign language.  
A study of second-language-acquisition theories. Emphasis on instruction as it relates to foreign languages and cultures.

**Minor in Linguistics**

The Minor in Linguistics offers an enhanced awareness of the components, functions, and interfaces of human language. It prepares students for careers and advanced study for which such an awareness is essential through coursework aligned with a student’s own professional goals and intellectual interests.

All students pursuing the Minor in Linguistics must complete 18 semester credit hours, at least 9 of which must be drawn from outside the major.

A. 3 semester credit hours selected from the following:

- ENG 3343  Principles of English Linguistics
- ESL 3003  Applications of Linguistics
- LNG 3813  Introduction to Linguistics

B. 3 semester credit hours selected from the following courses in the linguistics of a particular language:

- ENG 3323  History of the English Language
- ENG 3333  Introduction to the Structure of English
- GER 4333  Studies in German Linguistics
- SPN 3013  Spanish Phonetics and Pronunciation
- SPN 3113  Linguistic Structures of Spanish
- SPN 4113  Topics in Spanish Linguistics
- SPN 4123  The Spanish of the Southwest
C. 6 semester credit hours selected from the following courses in psycholinguistics, anthropological linguistics, sociolinguistics, or historical linguistics:

- ANT 2053 Introduction to Cultural Anthropology
- BBL 3013 Language Analysis and Bilingualism
- BBL 3133 Language Development in Bilinguals
- BBL 3403 Cultural and Linguistic Diversity in a Pluralistic Society
- FL 4013 Cross-Cultural Communication and Foreign Languages
- LNG 3833 Sociology of Language
- LNG 3843 Gender Issues in Language
- PSY 4323 Psychology of Language
- SOC 3523 Language and Society

D. 6 additional semester credit hours chosen in consultation with an advisor in one or more of the following approved areas: anthropology, bicultural-bilingual studies, English, French, German, linguistics, and Spanish. Courses may be chosen from sections B or C or from the following:

- COM 3083 Language and Communication Theory
- BBL 2003 Language, Culture, and Society
- BBL 4033 Assessing Language and Learning in Bicultural-Bilingual Contexts
- ESL 3033 Foundations in English as a Second Language
- FL 3013 Translation for the Language Specialist
- FL 4243 Foreign Language Instruction
- LNG 4013 Topics in Linguistics (May be repeated for credit in this section when topics vary.)
- SPN 4953 Special Studies in Spanish (when topic is Spanish linguistics)

COURSE DESCRIPTIONS

LINGUISTICS

(LNG)

3813 Introduction to Linguistics
(3-0) 3 hours credit.
Basic principles of analysis and description of the structure of language, including sound system, word order, and meaning. Also, overview of selected subfields of linguistics, such as historical linguistics, sociolinguistics, language acquisition, and bilingualism.

3833 Sociology of Language
(3-0) 3 hours credit.
The examination of the interrelationships among language, culture, and society. Topics may include language use in social context, language variation and change, maintenance and shift, and multilingual societies.

3843 Gender Issues in Language
(3-0) 3 hours credit. Prerequisite: Completion of or concurrent enrollment in 3000-level linguistics course.
The examination and analysis of issues related to gender and language, such as the historical basis for grammatical gender, gender-based sociolinguistic differences, and recent research in gender-based expectations for language use.

4013 Topics in Linguistics
(3-0) 3 hours credit. Prerequisite: One course in LNG, or consent of instructor.
An opportunity to explore linguistic topics in depth, including sociolinguistics, psycholinguistics, neurolinguistics, pragmatics, syntax, semantics, phonology, or phonetics. May be repeated for credit when topics vary. (Formerly LNG 3913. Credit cannot earned for both LNG 4013 and LNG 3913.)
Minor in Russian

All students pursuing the Minor in Russian must complete 18 semester credit hours.

A. 6 semester credit hours of required language skill courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RUS 2013</td>
<td>Intermediate Russian I</td>
<td>3</td>
<td>Continued opportunity to develop speaking, listening, reading, and writing</td>
</tr>
<tr>
<td>RUS 2023</td>
<td>Intermediate Russian II</td>
<td>3</td>
<td>skills. Continued exposure to Russian culture. [TCCN: RUSS 2312.]</td>
</tr>
</tbody>
</table>

B. 12 additional semester credit hours of Russian courses, 9 of which must be at the upper-division level

COURSE DESCRIPTIONS
RUSSIAN
(RUS)

1014 Elementary Russian I
(3-2) 4 hours credit. Fundamentals of Russian offering the opportunity to develop speaking, listening, reading, and writing skills. Introduction to Russian culture. [TCCN: RUSS 1411.]

1024 Elementary Russian II
(3-2) 4 hours credit. Prerequisite: RUS 1014, the equivalent, or an appropriate placement test score. Fundamentals of Russian offering the opportunity to further develop speaking, listening, reading, and writing skills. Further exposure to Russian culture. [TCCN: RUSS 1412.]

2013 Intermediate Russian I
(3-1) 3 hours credit. Prerequisite: RUS 1024, the equivalent, or an appropriate placement test score. Continued opportunity to develop listening, speaking, reading, and writing skills. Continued exposure to Russian culture. [TCCN: RUSS 2311.]

2023 Intermediate Russian II
(3-1) 3 hours credit. Prerequisite: RUS 2013, the equivalent, or an appropriate placement test score. Continued opportunity to develop listening, speaking, reading, and writing skills. Continued exposure to Russian culture. [TCCN: RUSS 2312.]

2333 Russian Literature in English Translation
(3-0) 3 hours credit. Major works of Russian literature across time, genres, and movements. (Formerly RUS 3333. Credit cannot be earned for both RUS 2333 and RUS 3333.)

3033 Oral Communication Skills
(3-0) 3 hours credit. Prerequisite: RUS 2013 or the equivalent. Further development of speaking skills in a variety of contexts. May be repeated once for credit when topics vary.

3143 Structure of Russian Language
(3-0) 3 hours credit. Prerequisite: RUS 2013 or the equivalent. Extensive grammar review. Further development of speaking and writing skills through activities directed at the intermediate-high and advanced levels. Considerations of differences between written and spoken language. May be repeated once for credit when topics vary.

3213 Advanced Russian
(3-0) 3 hours credit. Prerequisite: RUS 2023 or the equivalent. Opportunity to develop advanced-level oral and written communication skills in the Russian language, along with enhanced comprehension skills in listening and reading.
Topics in Russian Culture
(3-0) 3 hours credit. Prerequisite: RUS 2013 or the equivalent.
Further development of proficiency by content-based instruction. Topics may include geography, traditions, history, music, literature, art, or film. May be repeated for credit when topics vary.

COURSE DESCRIPTIONS
ARABIC
(ARA)

1014 Elementary Arabic I
(3-2) 4 hours credit.
Fundamentals of Arabic offering the opportunity to develop speaking, listening, reading, and writing skills. Introduction to Arabic culture.

1024 Elementary Arabic II
(3-2) 4 hours credit. Prerequisite: ARA 1014, an equivalent, or an appropriate placement test score.
Fundamentals of Arabic offering the opportunity to further develop speaking, listening, reading, and writing skills. Further exposure to Arabic culture.

2013 Intermediate Arabic I
(3-1) 3 hours credit. Prerequisite: ARA 1024, an equivalent, or an appropriate placement test score.
Continued opportunity to develop listening, speaking, reading, and writing skills. Continued exposure to Arabic culture.

2023 Intermediate Arabic II
(3-1) 3 hours credit. Prerequisite: ARA 2013, an equivalent, or an appropriate placement test score.
Continued opportunity to develop listening, speaking, reading, and writing skills. Continued exposure to Arabic culture.

COURSE DESCRIPTIONS
ITALIAN
(ITL)

1014 Elementary Italian I
(3-2) 4 hours credit.
Fundamentals of Italian offering the opportunity to develop listening, speaking, reading, and writing skills. Emphasis on listening and speaking. Introduction to Italian culture. [TCCN: ITAL 1411.]

1024 Elementary Italian II
(3-2) 4 hours credit. Prerequisite: ITL 1014, the equivalent, or the appropriate placement test score.
Fundamentals of Italian offering the opportunity to develop listening, speaking, reading, and writing skills. Emphasis on listening and speaking. Further study of Italian culture. [TCCN: ITAL 1412.]

2013 Intermediate Italian I
(3-1) 3 hours credit. Prerequisite: ITL 1024, the equivalent, or the appropriate placement test score.
Continued practice in developing listening, speaking, reading, and writing skills. Grammar and further study of Italian culture. [TCCN: ITAL 2311.]

2023 Intermediate Italian II
(3-1) 3 hours credit. Prerequisite: ITL 2013, the equivalent, or the appropriate placement test score.
Continued practice in developing listening, speaking, reading, and writing skills. Grammar review and further study of Italian culture. [TCCN: ITAL 2312.]
2333  Italian Literature in English Translation
       (3-0) 3 hours credit.
       Major works of Italian literature across time, genres, and movements. (Formerly ITL 3333. Credit cannot be
       earned for both ITL 2333 and ITL 3333.)

COURSE DESCRIPTIONS
JAPANESE
       (JPN)

1014  Elementary Japanese I
       (3-2) 4 hours credit.
       Fundamentals of Japanese offering the opportunity to develop basic speaking, listening, reading, and writing
       skills. Read and write hiragana and katakana. Emphasis on listening and speaking. Introduction to Japanese
       culture. [TCCN: JAPN 1411.]

1024  Elementary Japanese II
       (3-2) 4 hours credit. Prerequisite: JPN 1014, the equivalent, or the appropriate placement test score.
       Fundamentals of Japanese offering the opportunity to develop speaking, listening, reading, and writing skills.
       1412.]

2013  Intermediate Japanese I
       (3-1) 3 hours credit. Prerequisite: JPN 1024, the equivalent, or the appropriate placement test score.
       Continued opportunity to develop listening, speaking, reading, and writing skills. Read and write basic kanji.
       Reinforcement and expansion of basic grammar. Further study of Japanese culture. [TCCN: JAPN 2311.]

2023  Intermediate Japanese II
       (3-1) 3 hours credit. Prerequisite: JPN 2013, the equivalent, or the appropriate placement test score.
       Continued opportunity to develop skills in listening, speaking, reading, and writing. Expansion of the basic
       knowledge of kanji. Reinforcement and expansion of basic grammar. Study of Japanese culture. [TCCN: JAPN
       2312.]

COURSE DESCRIPTIONS
LATIN
       (LAT)

See LAT listings on page 247 in the Department of English, Classics, and Philosophy section.
DEPARTMENT OF MUSIC

The Department of Music is authorized to award the Bachelor of Music degree. This degree is accredited by the National Association of Schools of Music. Students may select one of four emphases in the Bachelor of Music program: music performance, composition, music marketing, or music studies. Within the Music Studies emphasis, students must select one of two concentrations: all-level instrumental or all-level choral. The department also offers a Minor in Music.

Students entering the Bachelor of Music program with a Music Studies emphasis may be required to satisfy additional requirements as prescribed by the State Board for Educator Certification (SBEC) and are advised to consult the College of Education and Human Development Advising and Certification Center.

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 used as an aid in counseling.

In order to declare music as a major, students must successfully audition for faculty in their principal performance area. This audition will also serve as a basis for placement into ensembles and private instruction. If a student is not enrolled in Private Instruction for two consecutive long semesters (Fall or Spring), the student must re-audition for admission into the music program and for placement in an appropriate level of private instruction.

Bachelor of Music Degree

The minimum number of semester credit hours required for this degree, including the Core Curriculum requirements, is 131 in the Music Performance emphasis, 130 in the Composition emphasis, 130 in the Music Marketing emphasis, and 129 in the Music Studies emphasis. Undergraduates seeking elementary teacher certification must complete the interdisciplinary studies degree.

All candidates for this degree must fulfill the Core Curriculum requirements and the music degree requirements, which are listed below. In addition, a candidate for the Bachelor of Music degree must complete the course requirements for the emphasis declared by the candidate.

Core Curriculum requirements: Students seeking the Bachelor of Music degree must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | **Mathematics** (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
**Science** (6 semester credit hours)  
Three hours from Level One and three hours from Level Two will satisfy this core requirement. |
Music Degree Requirements

All candidates for the Bachelor of Music degree, regardless of emphasis, must complete the following 36 semester credit hours of required music courses:

- MUS 1102 Aural Skills I
- MUS 1112 Basic Skills of Music I
- MUS 1122 Aural Skills II\(^1\)
- MUS 1132 Basic Skills of Music II
- MUS 2102 Aural Skills III
- MUS 2112 Aural Skills IV
- MUS 212 Basic Skills of Music III
- MUS 2162 Basic Skills of Music IV
- MUS 2252 Introduction to Music Literature
- MUS 2403 Conducting I
- MUS 3113 Analysis of Tonal Music
- MUS 3213 Music in Civilization I
- MUS 3223 Music in Civilization II
- MUS 3313 Microcomputer Applications in Music
- MUS 3413 Foundations of Music

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

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1. Students who qualify by examination may fulfill the Aural Skills & Basic Skills sequence by completing MUS 1123, 1133, 2103, and 2153 instead of MUS 1122, 1132, 2102, 2112, 2152, and 2162.
b. to perform in University ensembles; specific ensemble requirements for each degree emphasis are outlined in the Department of Music Student Handbook (available in the department office)
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 fulfill the recital attendance requirement as defined in the Department of Music Student Handbook; performance majors are required to make a minimum of one recital or area seminar appearance each semester on their principal instrument

Listening examinations are required for students who specify classical guitar as their principal instrument. Details regarding listening examinations are available in the Department of Music Student Handbook.

In addition, candidates for the Bachelor of Music degree must complete the course requirements for the emphasis they declare.

**Music Performance Emphasis**

All candidates for this emphasis must fulfill the Core Curriculum requirements (42 hours), the music degree requirements (36 hours), as well as the course requirements necessary for this emphasis (53 hours).

A. 24 semester credit hours of music performance are required from the following courses, some of which may be repeated for credit.

1. **Principal Instrument**
   
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 1512</td>
<td>Music Performance–Private Instruction (one semester)</td>
</tr>
<tr>
<td>MUS 1542</td>
<td>Music Performance–Private Instruction I (one semester)</td>
</tr>
<tr>
<td>MUS 2542</td>
<td>Music Performance–Private Instruction II (two semesters)</td>
</tr>
<tr>
<td>MUS 3543</td>
<td>Music Performance–Private Instruction IV (two semesters)</td>
</tr>
<tr>
<td>MUS 4543</td>
<td>Music Performance–Private Instruction V (two semesters)</td>
</tr>
</tbody>
</table>

2. **Secondary Instrument(s)**

   **Non-Keyboard Principal Instrument:**
   
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 1532</td>
<td>Functional Piano for Non-Keyboard Principals</td>
</tr>
</tbody>
</table>

   **Keyboard Principal Instrument:**
   
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 1552</td>
<td>Functional Piano for Keyboard Principals</td>
</tr>
</tbody>
</table>

   2 semester credit hours from the following:
   
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 1511</td>
<td>Music Performance–Secondary Instrument</td>
</tr>
<tr>
<td>MUS 1512</td>
<td>Music Performance–Private Instruction</td>
</tr>
<tr>
<td>MUS 1521</td>
<td>Class Piano&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>MUS 1531</td>
<td>Class Voice</td>
</tr>
</tbody>
</table>

B. 6 semester credit hours of music theory selected from the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 3133</td>
<td>Analysis of Twentieth-Century Music</td>
</tr>
<tr>
<td>MUS 3143</td>
<td>Orchestration</td>
</tr>
<tr>
<td>MUS 4113</td>
<td>Composition with Contrapuntal Techniques</td>
</tr>
</tbody>
</table>

   Exception: a student whose principal instrument is an orchestral instrument is required to take MUS 3143 Orchestration.

<sup>1</sup> Students selecting keyboard as their principal instrument may not use MUS 1521 to fulfill the secondary instrument requirement.
C. 4 semester credit hours of music literature (MUS 3252 Advanced Studies in Music Literature and Analysis)

Topics may include the following:

Vocal Literature (required of voice principals)
Operatic 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 credit 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 credit hours of MUS 4532 Music Pedagogy.

F. Voice principals are required to complete 4 semester credit hours of diction; MUS 3511 Diction for Singers may be repeated for credit to fulfill this requirement.

G. In order to demonstrate proficiency in one foreign language and acquire basic knowledge of a second, voice principals are required to complete at least two semesters of one foreign language (FRN 1014 and 1024, GER 1014 and 1024, or ITL 1014 and 1024) and one semester of a different foreign language (FRN 1014, GER 1014, or ITL 1014).

H. For all music performance majors except voice principals, free electives are required depending on principal instrument:

12 semester credit hours for piano principals
16 semester credit hours for all other performance majors

I. Admission to upper-division music performance as a music major must be approved by the appropriate qualifying committee; requirements for each area are specified in the Department of Music Student Handbook.

J. A senior recital (MUS 4561) approximately one hour in length must be presented and approved by the appropriate recital committee.

Composition Emphasis

All candidates for this emphasis must fulfill the Core Curriculum requirements (42 hours), the Music Degree Requirements (36 hours), as well as the course requirements necessary for this emphasis (52 hours).

A. 16 semester credit hours of music performance courses are required from the following courses, some of which may be repeated for credit.

1. Principal Instrument

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 1512</td>
<td>1</td>
<td>Music Performance–Private Instruction (1 semester)</td>
</tr>
<tr>
<td>MUS 1542</td>
<td>1</td>
<td>Music Performance–Private Instruction I (1 semester)</td>
</tr>
<tr>
<td>MUS 2542</td>
<td>2</td>
<td>Music Performance–Private Instruction II (2 semesters)</td>
</tr>
<tr>
<td>MUS 3532</td>
<td>2</td>
<td>Music Performance–Private Instruction III (2 semesters)</td>
</tr>
</tbody>
</table>
2. Secondary Instrument(s)

**Non-Keyboard Principal Instrument:**

MUS 1532 Functional Piano for Non-Keyboard Principals

**Keyboard Principal Instrument:**

MUS 1552 Functional Piano for Keyboard Principals

2 semester credit hours from the following:

MUS 1511 Music Performance-Secondary Instrument
MUS 1512 Music Performance-Private Instruction
MUS 1521 Class Piano¹
MUS 1531 Class Voice

B. 15 additional required semester credit hours of music theory and composition:

MUS 2142 Composition I
MUS 3133 Analysis of Twentieth-Century Music
MUS 3143 Orchestration
MUS 3162 Composition II
MUS 4113 Composition with Contrapuntal Techniques
MUS 4142 Composition III

C. 2 semester credit hours of MUS 3252 Advanced Studies in Music Literature and Analysis (Music since 1950 topic)

D. 3 semester credit hours of MUS 3123 Introduction to Synthesizers and Music

E. 15 semester credit hours of electives. Students intending to pursue graduate studies in Composition or Theory are strongly encouraged to take at least two semesters of a foreign language as electives; preferred languages include German, French, or Italian.

F. Students electing the Composition emphasis must interview with the Composition Committee for approval to pursue the emphasis at the upper-division level.

G. MUS 4561 Senior Recital is required of all students in the Composition emphasis; the student’s senior recital shall include a selection of the student’s compositions totaling a minimum of 30 minutes. The student will submit completed musical scores representing a majority of the proposed recital program to an examining committee the semester before that of the recital. The examining committee shall determine the acceptability of the recital program.

**Music Marketing Emphasis**

All candidates for this emphasis must fulfill the Core Curriculum requirements (42 hours), the Music Degree Requirements (36 hours), as well as the course requirements necessary for this emphasis (52 hours).

A. 16 semester credit hours of music performance courses are required from the following, some of which may be repeated for credit. Students must satisfy either the Keyboard Principal Instrument requirements or the Non-Keyboard Principal Instrument requirements.

¹ Students selecting keyboard as their principal instrument may not use MUS 1521 to fulfill the secondary instrument requirement.
1. Principal Instrument

MUS 1512 Music Performance–Private Instruction (1 semester)
MUS 1542 Music Performance–Private Instruction I (1 semester)
MUS 2542 Music Performance–Private Instruction II (2 semesters)
MUS 3532 Music Performance–Private Instruction III (2 semesters)

2. Secondary Instrument(s)

Non-Keyboard Principal Instrument:

MUS 1532 Functional Piano for Non-Keyboard Principals

Keyboard Principal Instrument:

MUS 1552 Functional Piano for Keyboard Principals

2 semester credit hours from the following:

MUS 1511 Music Performance–Secondary Instrument
MUS 1512 Music Performance–Private Instruction
MUS 1521 Class Piano
MUS 1531 Class Voice

B. 6 additional required semester credit hours:

MUS 3613 Music in Contemporary Life
MUS 4803 Seminar in Music Marketing

C. 24 semester credit hours of required support work:

ACC 2003 Foundations of Accounting
BLW 3013 Business Law
ECO 2013 Introductory Macroeconomics
MGT 3013 Introduction to Organization Theory, Behavior, and Management
MKT 3013 Principles of Marketing
MKT 3063 Persuasive Communication in Marketing
MKT 4013 Marketing Management
MUS 4933 Music Marketing Internship

D. 6 additional semester credit hours of music or music marketing selected from the following:

MUS 3123 Introduction to Synthesizers and Music
MUS 3153 Introduction to Audio Technology
MUS 4953 Special Studies in Music (Music Marketing topic)
MKT 3043 Advertising
MKT 3113 Retailing

E. Students electing the Music Marketing emphasis must interview with the Music Marketing Committee for approval to pursue the emphasis at the upper-division level.

1. Students selecting keyboard as their principal instrument may not use MUS 1521 to fulfill the secondary instrument requirement.
2. May be fulfilled by successful completion of either ACC 2003 or 2013.
3. Must be fulfilled by successful completion of either ECO 2003, 2013, or 2023. Students selecting the Music Marketing emphasis are required to complete 6 semester credit hours of ECO coursework. This 3 semester credit hour economics requirement is in addition to the Core Curriculum requirement and cannot be fulfilled with the same course.
Music Studies Emphasis

All candidates for this emphasis must fulfill the Core Curriculum requirements (42 hours), the Music Degree Requirements (36 hours), as well as the course requirements necessary for this emphasis (51 hours).

A. All candidates for the Bachelor of Music with a Music Studies emphasis, regardless of concentration, must complete the following 12 semester credit hours of private instruction in a principal instrument:

- MUS 1512 Music Performance–Private Instruction (1 semester)
- MUS 1542 Music Performance–Private Instruction I (1 semester)
- MUS 2542 Music Performance–Private Instruction II (2 semesters)
- MUS 3532 Music Performance–Private Instruction III (2 semesters)

The principal instrument for those whose student teaching will be in band must be a woodwind, brass, or percussion instrument(s); for instance, traditional percussion instruments as found in a band or orchestra — timpani, mallet instruments, multipercussion, but not drum set.

The principal instrument for those whose student teaching will be in string classes or orchestra must be violin, viola, cello, or contrabass (not electric bass).

The principal instrument for those whose student teaching will be in choral-general music must be voice or piano.

B. 18 semester credit hours of professional education courses (including 6 hours of student teaching); for specific required courses, consult the College of Education and Human Development Advising and Certification Center.

C. 3 semester credit hours in a state-mandated reading course; for specific required courses, consult the coordinator of music studies.

D. A qualifying 30-minute proficiency recital must be presented on the student’s principal instrument and approved prior to the semester of student teaching; specific requirements are outlined in the Department of Music Student Handbook.

E. Students electing the Music Studies emphasis must interview with the Music Studies Committee for approval to continue as a music studies major at the upper-division level.

F. Students enrolled in the Music Studies emphasis must successfully complete competency tests related to certification as specified by the Texas State Board for Educator Certification.

Details regarding the following track requirements are available in the Department of Music Student Handbook.

**Track I: All-Level Instrumental Music (Grades K–12)**

A. 18 semester credit hours in music:

1. 14 semester credit hours of required music courses:

   - MUS 2413 Conducting II
   - MUS 32521, 2 Advanced Studies in Music Literature and Analysis (2 semesters)
   - MUS 3401 Brass Instruments
   - MUS 3431 Woodwind Instruments I
   - MUS 3441 Woodwind Instruments II
   - MUS 3471 String Instruments
   - MUS 3481 Percussion Instruments

1. Must be repeated to include topics Wind Literature I and Wind Literature II
MUS 4452 The Marching Band

2. 4 semester credit hours of additional music performance study:

MUS 1532 Functional Piano for Non-Keyboard Principals
MUS 4532 Music Pedagogy

Track II: All-Level Choral Music (Grades K–12)

A. 18 semester credit hours in music:

1. 14 semester credit hours of required music courses:

MUS 2413 Conducting II
MUS 3252 Advanced Studies in Music Literature and Analysis (2 semesters)
MUS 3453 Music Studies I
MUS 3463 Music Studies II
MUS 3501 Diction Survey

2. 4 semester credit hours of additional music performance study:

Voice Principals:
MUS 1532 Functional Piano for Non-Keyboard Principals
MUS 4532 Music Pedagogy (vocal topic)

Keyboard Principals:
MUS 1552 Functional Piano for Keyboard Principals
MUS 1511 Music Performance-Secondary Instrument (voice); (2 semesters)

Minor in Music

All students pursuing the Minor in Music must complete 21 semester credit hours.

A. 8 semester credit hours of music theory 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

B. 3 semester credit hours of lower-division music studies selected from the following:

MUS 1521 Class Piano
MUS 1531 Class Voice
MUS 2252 Introduction to Music Literature
MUS 2403 Conducting I
MUS 2603 Beginning Guitar
MUS 2613 Intermediate Guitar
MUS 2663 History and Styles of Jazz
MUS 2673 History and Styles of Rock
MUS 2683 Masterpieces of Music
MUS 2693 The Music of Latin America

1. Students with a string instrument as their principal instrument should consult with the coordinator of music studies or the College of Liberal and Fine Arts Undergraduate Advising Center to determine the approved substitutions for these courses.
2. Must be repeated to include topics Choral Literature I and Choral Literature II.
C. 6 semester credit hours of upper-division music studies selected from the following:

- MUS 3123 Introduction to Synthesizers and Music
- MUS 3153 Introduction to Audio Technology
- MUS 3313 Microcomputer Applications in Music
- MUS 3453 Music Studies I
- MUS 3463 Music Studies II
- MUS 3613 Music in Contemporary Life

D. Two semesters (a minimum of 2 semester credit hours) of Music Ensemble, as assigned

E. 2 semester credit hours of MUS 2001 Concert Music

**COURSE DESCRIPTIONS**

**MUSIC**

**(MUS)**

1001  **Freshman Topics in Music**  
(1-1) 1 hour credit.  
Required for entering freshmen in the College of Liberal and Fine Arts with less than 15 hours of coursework and who are interested in majoring in Music. Critical study of topics in music. Innovative classroom and learning techniques are used to introduce students to these topics and to help strengthen critical thinking, problem solving, and writing skills. Specific topics covered include degree plan requirements, practice, rehearsal, and performance concerns, learning strategies and study techniques, concert behavior, and introduction to the use of information resources and available Arts building facilities, field trips, and guest lectures by various faculty. Content varies with each instructor. A maximum of 3 semester credit hours of freshman topics courses may apply to a bachelor’s degree, although this specific topic may be taken only once.

1102  **Aural Skills I**  
(2-1) 2 hours credit. Enrollment is limited to music majors and minors.  
Offers the opportunity for training in sight singing, aural skills, and keyboard application. Should be taken concurrently with MUS 1112. [TCCN: MUSI 1216.]

1112  **Basic Skills of Music I**  
(2-0) 2 hours credit. Enrollment is limited to music majors and minors.  
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. [TCCN: MUSI 1211.]

1122  **Aural Skills II**  
(2-1) 2 hours credit. Prerequisite: MUS 1102 or the equivalent. Enrollment is limited to music majors and minors.  
Offers the opportunity to continue training in sight singing, aural skills, and keyboard application, with emphasis on harmonic skills and twentieth-century materials. Should be taken concurrently with MUS 1132. [TCCN: MUSI 1217.]

1123  **Aural Skills II Honors**  
(3-1) 3 hours credit. Prerequisites: successful completion of MUS 1102 or the equivalent with a grade of “B” or higher and consent of instructor. Enrollment is limited to music majors.  
An accelerated study of sight singing, aural skills, and keyboard techniques applied to literature and theory drawn from MUS 1133. Must be taken concurrently with MUS 1133.
1132 Basic Skills of Music II
(2-0) 2 hours credit. Prerequisite: MUS 1112 or the equivalent. Enrollment is limited to music majors and minors. Offers the opportunity for development of harmonic analytical and writing skills. Analytical techniques are applied to music from a variety of style periods. Should be taken concurrently with MUS 1122. [TCCN: MUSI 1212.]

1133 Basic Skills of Music II Honors
(3-0) 3 hours credit. Prerequisites: successful completion of MUS 1112 or the equivalent with a grade of “B” or higher and consent of instructor. Enrollment is limited to music majors. An accelerated study of harmonic analytical and writing skills in tonal music. Includes chromatic materials of the early 19th century as well as an introduction to Schenkerian concepts of structural analysis. Must be taken concurrently with MUS 1123.

1511 Music Performance-Secondary Instrument
1 hour credit. Placement by audition and concurrent enrollment in an assigned University ensemble. Enrollment is limited to music majors.
Private instruction for students desiring to or required to study a secondary instrument the following: bassoon, clarinet, contrabass, cornet, electric bass, euphonium, flute, classical guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, or voice. Seminar attendance may be required. May be repeated for credit.

1512 Music Performance-Private Instruction
2 hours credit. Prerequisites: Placement by audition and concurrent enrollment in an assigned University ensemble. Enrollment is limited to music majors.
Private instruction for all first-semester students, both freshmen and transfer students, desiring to or required to study the following instruments: bassoon, clarinet, contrabass, cornet, electric bass, euphonium, flute, classical guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, or voice. Seminar attendance may be required. Students must earn a grade of “C” or higher to progress to MUS 1542. May be repeated for credit a maximum of two semesters.

1521 Class Piano
1 hour credit. Prerequisite: Music major or consent of instructor. For music 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. Topics include Level 1 and Level 2. May be repeated for credit at a more advanced level.

1531 Class Voice
(1-0) 1 hour credit.
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. [TCCN: MUSI 1183.]

1532 Functional Piano for Non-Keyboard Principals
(2-0) 2 hours credit. Prerequisite: Levels 1 and 2 of MUS 1521 Class Piano or consent of instructor. For non-keyboard principals. Offers the opportunity to develop score reading, transposition, and multiple-part reading.

1542 Music Performance-Private Instruction I
2 hours credit. Prerequisites: Successful completion of MUS 1512 with a grade of “C” or higher or placement by audition and concurrent enrollment in an assigned University ensemble. Limited to music majors. Private instruction for students desiring to or required to study the following instruments: bassoon, clarinet, contrabass, cornet, electric bass, euphonium, flute, classical guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, or voice. Seminar attendance may be required. May be repeated for credit a maximum of three semesters.
1552 **Functional Piano for Keyboard Principals**  
(2-0) 2 hours credit. Prerequisite: Music major with piano or organ as the principal instrument or consent of instructor.  
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. Prerequisite: Music major or minor.  
Required attendance at a selected number of approved music concerts and recitals as determined by the Department of Music. May be repeated for credit.

2102 **Aural Skills III**  
(2-1) 2 hours credit. Prerequisite: MUS 1122 or an equivalent. Enrollment is limited to music majors.  
Sight singing, aural skills, and keyboard techniques applied to literature and theory drawn from MUS 2152. Should be taken concurrently with MUS 2152. [TCCN: MUSI 2216.]

2103 **Aural Skills III Honors**  
(3-1) 3 hours credit. Prerequisites: successful completion of MUS 1123 with a grade of “B” or higher and consent of instructor. Enrollment is limited to music majors.  
Sight singing, aural skills, and keyboard techniques applied to literature and theory drawn from MUS 2153. Must be taken concurrently with MUS 2153.

2112 **Aural Skills IV**  
(2-1) 2 hours credit. Prerequisites: MUS 2102 and MUS 2152, or their equivalents. Enrollment is limited to music majors.  
Application of skills to materials drawn from MUS 2162 Basic Skills of Music IV. Should be taken concurrently with MUS 2162. [TCCN: MUSI 2217.]

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 vary according to the topic offered: Jazz Improvisation or Improvisation in Traditional Styles. [TCCN: MUSI 1263.]

2142 **Composition I**  
2 hours credit. Prerequisites: MUS 1102, MUS 1112, and consent of instructor.  
Private study of the fundamentals of composition through small forms. Seminar attendance is required. [TCCN: MUSI 1286.]

2152 **Basic Skills of Music III**  
(2-0) 2 hours credit. Prerequisite: MUS 1132 or the equivalent. Enrollment is limited to music majors.  
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. [TCCN: MUSI 2211.]

2153 **Basic Skills of Music III Honors**  
(3-0) 3 hours credit. Prerequisites: successful completion of MUS 1133 or an equivalent with a grade of “B” or higher and consent of instructor. Enrollment is limited to music majors.  
The continued study of chromatic materials of music, including a survey of form and an introduction to analytical techniques of twentieth-century music. Must be taken concurrently with MUS 2103.

2162 **Basic Skills of Music IV**  
(2-0) 2 hours credit. Prerequisite: MUS 2152 or the equivalent. Enrollment is limited to music majors.  
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. [TCCN: MUSI 2212.]

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2252  **Introduction to Music Literature**  
(2-1) 2 hours credit. Prerequisite: MUS 1132 or consent 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. (Formerly MUS 2253. Credit cannot be earned for both MUS 2252 and MUS 2253.)

2403  **Conducting I**  
(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, lefthand cueing, and rehearsal techniques.

2413  **Conducting II**  
(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. Topics include Choral Conducting and Instrumental Conducting.

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. May be repeated for credit.

2542  **Music Performance–Private Instruction II**  
2 hours credit. Prerequisites: MUS 1542 or placement by audition, and concurrent enrollment in an assigned University ensemble. Limited to music majors.  
Private instruction for students desiring to or required to study the following instruments: bassoon, clarinet, contrabass, cornet, electric bass, euphonium, flute, classical guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, or voice. Seminar attendance may be required. May be repeated for credit a maximum of three semesters.

2603  **Beginning 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 students learn technical aspects as defined by the early nineteenth-century guitar masters.

2613  **Intermediate Guitar**  
(3-0) 3 hours credit. Prerequisite: MUS 2603 or the equivalent.  
Designed primarily for the non-music major. Continued study of rudimentary classical guitar repertoire and basic elements of classical guitar technique.

2623  **Basic Elements of Music for the Non-Music Major**  
(3-0) 3 hours credit.  
A study of the basic elements of music through the notation of pitch, rhythm, and meter in traditional musics. Emphasis is placed on the historical development of music notation and music theoretical systems and their applications to both classical and popular musics. [TCCN: MUSI 1301.]

2663  **History and Styles of Jazz**  
(3-0) 3 hours credit.  
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.  
A survey of the evolution of rock styles, contributions of important performers, and musical techniques involved in the creation and performance of rock music.
2683  **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. (Formerly MUS 3643. Credit cannot be earned for both MUS 2683 and MUS 3643.) [TCCN: MUSI 1306.]

2693  **The Music of Latin America**  
(3-0) 3 hour credit.  
Surveys the folk, popular, and classical musical traditions of Latin America, with special emphasis on the principal regions of Mexico, Brazil, Argentina, and the Andes. (Formerly MUS 1213. Credit cannot be earned for both MUS 2693 and MUS 1213.)

3113  **Analysis of Tonal Music**  
(3-0) 3 hours credit. Prerequisites: MUS 2112, MUS 2162,1 and MUS 2252, their equivalents, or consent of instructor.  
Analysis of forms and structures from the common practice era of tonal music beginning with a study of such smaller structural units as periods, binaries, and ternaries. Major emphasis is placed on such larger forms and genres as fugue and other contrapuntal types, sonata, and rondo.

3123  **Introduction to Synthesizers and Music**  
3 hours credit. Prerequisite: MUS 3313 or consent of instructor.  
Private study serving as a conceptual and practical introduction to digital and analog synthesizers, sequencers, tape recorders, mixers, MIDI, samplers, and sound-processing techniques. Includes a survey of the history and literature of electronic music.

3133  **Analysis of Twentieth-Century Music**  
(3-0) 3 hours credit. Prerequisite: MUS 3113.  
Analysis of forms and structures drawn from the literature and repertoire of the twentieth century. Beginning with a review of late tonal practices, such styles and techniques as Impressionism, atonality, serialism, and pre- and postserial tonality are studied in depth.

3143  **Orchestration**  
(3-0) 3 hours credit. Prerequisites: MUS 2112, MUS 2162, MUS 2252, and MUS 3313 or their equivalents.  
Applied instrumentation emphasizing idiomatic scoring for various orchestral and wind combinations with an approach to writing for full orchestra and symphonic band.

3153  **Introduction to Audio Technology**  
(3-0) 3 hours credit. Prerequisite: Consent of instructor.  
Fundamentals of recording, playback, and sound reinforcement equipment operation. Topics will include analog and digital recording principles, microphone selection and placement, and sound and recording engineering in live and studio applications.

3162  **Composition II**  
2 hours credit. Prerequisites: MUS 2112, MUS 2142, MUS 2162, and MUS 2252, or their equivalents and consent of instructor.  
Private study in applied composition, with emphasis on expansion of musical materials to larger forms. Seminar attendance is required. May be repeated for credit.

3172  **Composition in Electronic Media**  
2 hours credit. Prerequisite: MUS 3123.  
Private study in composition, with an emphasis on such electroacoustic music techniques as digital sound synthesis and sampling, including an in-depth study of various computer applications in music. Seminar attendance is required. May be repeated for credit.

1. Qualified students may fulfill the Aural Skills and Basic Skills prerequisites by successfully completing MUS 2103 and 2153.
3213 Music in Civilization I
(3-0) 3 hours credit. Prerequisites: MUS 2162 and MUS 2252, or their equivalents. A study of the development of musical styles and literatures from antiquity to 1750, with emphasis on the parallels and influences of art, architecture, literature, and theater on musical art. In addition, the adaptation and influences of non-Western traditions and styles on Western art music will be considered.

3223 Music in Civilization II
(3-0) 3 hours credit. Prerequisites: MUS 2162 and MUS 2252, or their equivalents. A study of the development of musical styles and literatures from the Enlightenment to the present, with emphasis on the parallels and influences of art, architecture, literature, and theater on musical art. In addition, the adaptation and influences of non-Western traditions and styles on Western art music will be considered.

3252 Advanced Studies in Music Literature and Analysis
(2-1) 2 hours credit. Prerequisites: Upper-division standing and consent of instructor. A study of music literature and analysis at an advanced level in such topics as Chamber Music; Wind Literature I; Wind Literature II; Vocal Literature, Orchestral Literature; History and Literature of the Guitar; Choral Literature I; Choral Literature II; Literature of the Pianoforte; Organ Literature; The Operatic Tradition; Advanced Analytical Techniques; Music Since 1950; and The Instrumental Concerto. May be repeated for credit.

3313 Microcomputer Applications in Music
(3-1) 3 hours credit. Prerequisite: Consent of instructor. Survey of concepts and development of skills related to current computer technology in music. Topics include MIDI, sequencers, tonal synthesis, note editors, productivity tools, and recent trends in the field.

3401 Brass Instruments
(1-1) 1 hour credit. Prerequisite: MUS 1132 or the equivalent. A study of playing techniques, selection of materials, and maintenance of brass instruments.

3413 Foundations of Music
(3-1) 3 hours credit. Prerequisites: MUS 2162 and 2252 or their equivalents, and upper-division standing in music. An approach to the foundations of music from different disciplinary perspectives. Focuses on music in contemporary society; current research from anthropology, biology, psychology, sociology, philosophy and aesthetics, economics, and ethics will be presented.

3431 Woodwind Instruments I
(1-1) 1 hour credit. Prerequisite: MUS 1132 or the equivalent. A study of the playing techniques, selection of materials, and maintenance of flutes and clarinets. (Formerly MUS 3451. Credit cannot be earned for both MUS 3451 and MUS 3431.)

3441 Woodwind Instruments II
(1-1) 1 hour credit. Prerequisite: MUS 1132 or the equivalent. A study of the playing techniques, selection of materials, and maintenance of saxophones, oboes, and bassoons. (Formerly MUS 3451. Credit cannot be earned for both MUS 3451 and MUS 3441.)

3453 Music Studies I
(3-1) 3 hours credit. Prerequisite: Upper-division standing in music or consent of instructor. A study of the essential elements of music as they relate to children. (Formerly MUS 4423. Credit cannot be earned for both MUS 3453 and MUS 4423.)

3463 Music Studies II
(3-1) 3 hours credit. Prerequisite: Upper-division standing in music or consent of instructor. A study of the essential elements of music as they relate to teenagers.
3471 **String Instruments**  
(1-1) 1 hour credit. Prerequisite: MUS 1132 or the equivalent.  
A study of playing techniques, selection of materials, and maintenance of string instruments.

3481 **Percussion Instruments**  
(1-1) 1 hour credit. Prerequisite: MUS 1132 or the equivalent.  
A study of playing techniques, selection of materials, and maintenance of percussion instruments.

3501 **Diction Survey**  
(1-1) 1 hour credit.  
A survey of English and foreign language pronunciation as applied to performance.

3511 **Diction for Singers**  
(1-1) 1 hour credit.  
An intensive study of language pronunciation as applied to performance. Topics include English, French, Italian, and German. May be repeated for credit.

3532 **Music Performance–Private Instruction III**  
2 hours credit. Prerequisites: Successful completion of two semesters of MUS 2542 or placement by audition, and concurrent enrollment in an assigned University ensemble. Limited to music majors.  
Private instruction for students desiring to or required to study the following instruments: bassoon, clarinet, contrabass, cornet, flute, classical guitar, electric bass, euphonium, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, or voice. Seminar attendance may be required. May be repeated for credit a maximum of three semesters.

3543 **Music Performance–Private Instruction IV**  
3 hours credit. Prerequisites: Upper division standing, successful completion of two semesters of MUS 2542 or placement by audition, and concurrent enrollment in an assigned University ensemble. 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 bassoon, clarinet, contrabass, cornet, euphonium, flute, classical guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, or voice. Seminar attendance may be required. May be repeated for credit a maximum of three semesters.

3613 **Music in Contemporary Life**  
(3-0) 3 hours credit.  
Designed to increase students' awareness of the varied functions of music in society. Topics include film and television music, environmental music, the recording industry, the publishing industry, music in the schools, ceremonial music, and concert life.

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.  
Select ensembles, both mixed and women’s, open to all students by audition. These groups perform 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.
3731 **UTSA University Band**  
(0-3) 1 hour credit.  
Open to all students by audition. Ensemble rehearses and performs standard repertoire of concert band music. May be repeated for credit.

3741 **Chamber Orchestra**  
(0-3) 1 hour credit. Open to all string students by audition; concurrent enrollment in MUS 3761 is required of all string principals.  
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.

3752 **UTSA Symphonic Band**  
(0-5) 2 hours credit.  
Open to all students by audition. Ensemble performs standard repertoire for the full symphonic band. May be repeated for credit.

3761 **UTSA Orchestra**  
(0-3) 1 hour credit.  
Open to all students by audition; concurrent enrollment in MUS 3741 is required of all string principals. The UTSA Orchestra studies, rehearses, and performs literature from the standard orchestral repertoire. May be repeated for credit.

3771 **Jazz Ensemble**  
(0-3) 1 hour credit.  
Open to all students by audition. Ensemble specializes in the performance of the various streams of jazz and other music appropriate to stage bands, jazz ensembles, and vocal jazz groups. May be repeated for credit.

3792 **Opera Workshop**  
(0-5) 2 hours credit.  
Open to all students by audition. The study and performance of opera and other types of musical theater from the Baroque period to the present. May be repeated for credit.

4113 **Composition with Contrapuntal Techniques**  
3 hours credit. Prerequisites: MUS 2112, MUS 2162, and MUS 2252.  
Private study in applied composition, with an emphasis on eighteenth- and twentieth-century contrapuntal techniques and procedures.

4142 **Composition III**  
2 hours credit. Prerequisites: MUS 3113 and MUS 3162, or consent of instructor.  
Writing in the larger forms for small and large ensembles and electronic media. Seminar attendance is required. May be repeated for credit.

4452 **The Marching Band**  
(2-1) 2 hours credit. Prerequisites: MUS 2162 and MUS 2252.  
A study of the repertoire, materials, and maneuvers used by marching bands. (Formerly MUS 4453. Credit cannot be earned for both MUS 4453 and MUS 4452.)
4531  **Music Pedagogy I**  
(1-1) 1 hour credit. Prerequisite: Upper-division standing in music or consent of instructor. 
Survey of techniques, practices, and materials related to the development of teaching of orchestral and solo 
instruments and voice. Review of materials for beginning, intermediate, and advances students. Topics include 
Strings, Brass, Woodwinds, Percussion, Guitar, Piano, Organ, Voice, and Instrumental Ensemble. May be 
repeated for credit. Voice topic requires successful completion of two semesters of MUS 1511 (Voice) or 
equivalent competency. Instrumental Ensemble topic requires successful completion of MUS 3401, MUS 3431, 
and MUS 3441. (Credit cannot be earned for both MUS 4531 and MUS 4532.)

4532  **Music Pedagogy**  
(2-1) 2 hours credit. Prerequisite: Upper-division standing in music or consent of instructor. 
Survey of techniques, practices, and materials related to the development and teaching of orchestral and solo 
instruments and voice. Review of materials for beginning, intermediate, and advanced students. Topics include 
Strings, Brass, Woodwinds, Percussion, Guitar, Piano, Organ, Voice, and Instrumental Ensemble. May be 
repeated for credit. Voice topic requires successful completion of two semesters of MUS 1511 (Voice) or 
equivalent competency. Instrumental Ensemble topic requires successful completion of MUS 3401, MUS 3431, 
and MUS 3441.

4541  **Music Pedagogy II**  
(1-1) 1 hour credit. Prerequisite: Upper-division standing in music or consent of instructor. 
Practical application of techniques, practices, and materials related to the development and teaching of orchestral 
and solo instruments and voice. Topics include Strings, Brass, Woodwinds, Percussion, Guitar, Piano, Organ, 
Voice, and Instrumental Ensemble. May be repeated for credit. Voice topic requires successful completion of 
two semesters of MUS 1511 (Voice) or equivalent competency. Instrumental Ensemble topic requires successful 
completion of MUS 3401, MUS 3431, and MUS 3441. (Credit cannot be earned for both MUS 4541 and MUS 
4532.)

4543  **Music Performance–Private Instruction V**  
3 hours credit. Prerequisites: Successful completion of two semesters of MUS 3543 or the equivalent, placement 
by audition, and concurrent enrollment in an assigned University ensemble. 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 bassoon, clarinet, contrabass, cornet, euphonium, flute, classical 
guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, 
violin, violoncello, or voice. Seminar attendance may be required. May be repeated for credit a maximum of 
three semesters. (Formerly MUS 4544.)

4561  **Senior Recital**  
1 hour credit. Prerequisite: Consent of instructor. Concurrent enrollment in MUS 4543 is required of students in 
the Performance emphasis; concurrent enrollment in MUS 4142 is required of students selecting the 
Composition emphasis. 
A public performance presented as a culmination of the student’s private instruction.

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 perform this 
repertoire. Instruction in brass ensemble, woodwind ensemble, percussion ensemble, string ensemble, mixed 
ensemble, vocal ensemble, and chamber opera. 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 to 3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student’s advisor, the Department Chair, 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4933 Music Marketing Internship

3 hours credit. Prerequisites: MKT 3013, MUS 3613, MUS 4803, grade point average of 2.5 or higher, and permission in writing from the instructor and Department Chair.

The opportunity to gain knowledge through experience in the music industry under the supervision of private business professionals. Opportunities will be developed in consultation with the faculty advisor and appropriate business professionals.

4953 Special Studies in Music

(3-0) 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 may be repeated for credit when the topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.
DEPARTMENT OF POLITICAL SCIENCE AND GEOGRAPHY

The Department of Political Science and Geography offers Bachelor of Arts degrees in Political Science and Geography. The department also offers Minors in Geography, Political Science, International Studies, and Public Administration.

At least 33 semester credit hours of coursework are required to fulfill a political science or geography major. The 33-hour total is considered a minimum, and students are encouraged to deepen and broaden their grasp of their major through careful allocation of their elective semester credit hours.

All degrees require students to complete at least 6 semester credit hours of support work. These courses, which require advance approval from advisors, should serve to introduce students to other social sciences in addition to those entailed in the coursework within students' major discipline.

INTERNSHIP STUDY

Majors in the Department of Political Science and Geography may apply 3 or 6 semester credit 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 Department of Political Science and Geography. Supervision and grading of the internship experience are normally done by department faculty members. Students majoring in nonsocial science disciplines 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.

DEPARTMENT HONORS

The Department of Political Science and Geography, through its Honors program, provides the opportunity for advanced study under close faculty supervision to those students who have demonstrated outstanding scholarship.

Selection for honors designation is based on academic performance and recommendation by discipline faculty. To be eligible for the program, students must have a minimum grade point average of 3.0 overall at UTSA and a minimum grade point average of 3.5 in their major at UTSA. Minimum grade point averages must be maintained for students to receive the approval of the Honors Committee and the discipline faculty. Students applying for Honors are expected to enroll in the appropriate honors thesis course during their final two semesters. The completed thesis must be approved by the supervising faculty sponsor and another faculty member. Students interested in this program should contact their faculty advisors for additional information.

Bachelor of Arts Degree in Geography

The minimum number of semester credit hours required for the Bachelor of Arts degree in Geography, including the Core Curriculum requirements, is 120. Thirty-nine of the total semester credit hours required for the degree must be at the upper-division level.

All candidates for this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Arts degree in Geography must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.
## Degree Requirements

### A. 33 semester credit hours in the major, 24 of which must be at the upper-division level:

1. 15 semester credit hours:

   9 required semester credit hours:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRG 2613</td>
<td>Physical Geography</td>
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<tr>
<td>GRG 2623</td>
<td>Human Geography</td>
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<tr>
<td>GRG 3323</td>
<td>Spatial Analysis</td>
</tr>
</tbody>
</table>

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### Core Curriculum Requirements

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhetoric</td>
<td>All students must take the following six hours to meet this core requirement: ENG 1013 Freshman Composition, ENG 1023 Discourse across the Disciplines</td>
</tr>
</tbody>
</table>
| Domain I: Mathematics and Science | Mathematics (3 semester credit hours)  
   | Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
   | Science (6 semester credit hours)  
   | GRG 2613 Physical Geography satisfies the core requirement for Domain I, Level Two; however, another course must be taken to meet the requirement for Level One. |
| Domain II: Society and Culture | United States History and Diversity (6 semester credit hours)  
   | Any six hours listed under this section in the list of core courses will satisfy this core requirement.  
   | Political Studies (6 semester credit hours)  
   | POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.  
   | Social and Behavioral Sciences (3 semester credit hours)  
   | GRG 2623 Human Geography  
   | Economics (3 semester credit hours)  
   | Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
| Domain III: Literature and the Arts | Literature (3 semester credit hours)  
   | Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
   | The Arts (3 semester credit hours)  
   | Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
| Domain IV: Interdisciplinary Studies | (3 semester credit hours)  
   | Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
6 additional semester credit hours selected from the following:

GRG 3113 Geography of the United States and Canada
GRG 3123 Geography of Latin America
GRG 3133 Geography of Europe
GRG 3143 Geography of Mexico
GRG 3153 Geography of Texas

2. 18 additional semester credit hours of geography electives chosen in consultation with the student’s advisor. A maximum of 6 of these hours, as approved by student’s advisor, may be applied to the major from selected courses in the following three areas:

Urban and economic studies
International studies
Earth science and resources

B. 6 semester credit hours of courses in the social sciences outside the major, chosen with the consent of the advisor

C. 6 semester credit hours of a single language other than English

D. 33 semester credit hours of electives

Minor in Geography

All students pursuing the Minor in Geography must complete 18 semester credit hours.

A. 6 semester credit hours of courses in core concepts and regions:

GRG 1013 Fundamentals of Geography
GRG 1023 World Regional Geography

B. 3 semester credit hours of upper-division regional geography selected from the following:

GRG 3113 Geography of the United States and Canada
GRG 3123 Geography of Latin America
GRG 3133 Geography of Europe
GRG 3143 Geography of Mexico
GRG 3153 Geography of Texas

C. 9 semester credit hours of upper-division electives in geography

To declare a Minor in Geography, obtain advice, or seek approval of substitutions for course requirements, students should consult the College of Liberal and Fine Arts Undergraduate Advising Center.

COURSE DESCRIPTIONS

GEOGRAPHY

(GRG)

1013 Fundamentals of Geography
(3-0) 3 hours credit.
Introduction to the study of physical and cultural features of the earth and their distributions, causes, and consequences to man. Topics include landforms, climate, natural resources, population, human behavior in spatial context, economic growth, and urbanization. [TCCN: GEOG 1300.]
1023  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, the former USSR, and Australasia. (Formerly GRG 2633. Credit cannot be earned for both GRG 1023 and GRG 2633.) [TCCN: GEOG 1303.]

2613  Physical Geography
(3-0) 3 hours credit.
Study of the earth’s major landforms and climatic patterns, the processes giving rise to these patterns, and their relationship to human activity. [TCCN: GEOG 1301.]

2623  Human Geography
(3-0) 3 hours credit.
Study of the relationship between the social and spatial structures of society, including spatial stereotyping, spatial perception, human territoriality, innovation diffusion, migration, and spatial planning. [TCCN: GEOG 1302.]

2633  Introduction to Geographic Methods
(3-0) 3 credit hours.
Broad survey of geographic research methods. May include Map Interpretation, Basic Field Techniques, Archival Research Methods, Geographic Information Systems, Computer Cartography, Digital Remote Sensing, and Spatial Statistics. Students will be exposed to ways geographic data is used to address social and environmental problems and will receive some hands-on experience with modern computer-based geographic technologies. This course is strongly recommended before upper-division courses in geographic techniques (GIS, Computer Cartography, Spatial Analysis, or Remote Sensing).

3113  Geography of the United States 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, emphasizing economic development and social change.

3133  Geography of Europe
(3-0) 3 hours credit.
Survey of the European culture area, including Western Europe, Eastern Europe, and the Baltics. Discussion of urban, political, ethnic, and economic forces shaping the post-Cold War geography of Europe, including the European Union and the Russian Federation.

3143  Geography of Mexico
(3-0) 3 hours credit.
Investigation of Mexico’s physical and social geography, including climatic and geomorphologic influences, the historical imprint of the Amerindians and the Spanish, population growth and migration, urbanization, patterns of agriculture and industry, and current social and economic issues.

3153  Geography of Texas
(3-0) 3 hours credit.
A topical and regional examination of the physical, cultural, and economic patterns of the state. Includes demographic characteristics, agriculture, mining, manufacturing, selected urban areas, and current social issues. May include a field trip to the non-metropolitan hinterland of San Antonio.
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.

3314  **Introduction to Geographic Information Systems**  
(3-2) 4 hours credit.  
An introductory course on the application of the computer to the acquisition, manipulation, analysis and display of geographic data; overview of projection systems, data acquisition issues, and presentation techniques. Three lecture and two laboratory hours per week. It is strongly recommended students take GRG 2633 or have equivalent experience before enrolling in GRG 3314. (Formerly GRG 3313. Credit cannot be earned for both GRG 3314 and GRG 3313.)

3323  **Spatial Analysis**  
(3-0) 3 hours credit.  
Conceptualization and statistical analysis of spatial variables. Topics may include the scientific method in the social sciences, research design, spatial sampling, spatial pattern analysis, and the univariate and multivariate analysis of areal data. May include the application of computer-based geographic information systems to the analysis of spatial patterns and distributions.

3334  **Advanced Geographic Information Systems**  
(3-2) 4 credit hours. Prerequisite: GRG 3313 or GRG 3314.  
Advanced topics in the use of computer-based analysis of geographic information including data acquisition, modeling complex datasets, and an introduction to scripting to customize an industry-standard software package. (Formerly GRG 3333. Credit cannot be earned for both GRG 3334 and GRG 3333.)

3343  **Analytical and Computer Cartography**  
(2-2) 3 hours credit.  
The design, construction, production, and reproduction of maps; cartographic theory, computer cartography, and an introduction to techniques of geographic visualization.

3423  **Geopolitics of Russia and Eurasia**  
(3-0) 3 hours credit.  
Multidisciplinary introduction and regional study of the Russian Federation and the Eurasian realm, including the Caucasus, Central Asian nations, Afghanistan, and Mongolia. Both the geography and the politics of this area will be analyzed. Historical and contemporary geopolitical topics include nation-building, regional civilizations, revolution, terrorism, the nineteenth century “Great Game,” the rise of the USSR, and the current transition of the Russian Federation to an uncertain future. (Same as POL 3423. Credit cannot be earned for both GRG 3423 and POL 3423.)

3433  **The Geography and Politics of the Asian Rim**  
(3-0) 3 hours credit.  
An analysis of the states spanning from the Indian subcontinent through Indo-China to Japan and China. Examination of their physical and social geographies and the regional political dynamics prevalent in the modern era. Selected themes will include population dynamics, cultural hearths, immigration patterns, economic development, and regional integration.

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 planning process by which a city prepares and implements
its master plan.

3533  Geography of Economic Activity
       (3-0) 3 hours credit.
       Analysis of the location of economic activities at local, regional, and national levels. Case studies of agricultural,
industrial, retail, and service locations are analyzed through relevant theories and models.

3613  Conservation of Resources
       (3-0) 3 hours credit.
       A survey of world resources, environmental policies, and global conservative strategies. Topics include
agriculture, water resources, air pollution, endangered species, wildlife preservation, habitat conservation, 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.

3643  Political Geography
       (3-0) 3 hours credit.
       Investigates the role of the political state in society and the evolution of state organization from classical times to
the present. Topics may include centrifugal and centripetal forces, geopolitics, territorial morphology,
boundaries, core areas, and emerging supranationalism.

3653  Geographic Perspectives on Women
       (3-0) 3 hours credit.
       The course studies the role of women in the spatial organizations of society. Of particular importance is the
question of whether men and women differ in their perceptions of physical, social, and built environments, and
the consequent policy expressions in political and built environments.

3713  Weather and Climate
       (3-0) 3 hours credit.
       Analysis of the elements and causes of daily weather, climatic classifications, and climate change. Study of
world distributions and components of climate, with studies of air pressure, precipitation, air masses, optical
phenomena, and wave cyclones. Regional attention to weather patterns, including tornadoes and hurricanes.

3723  Physiography
       (3-0) 3 hours credit.
       Description and interpretation of relief features of the earth’s surface, by examination of regions with particular
patterns of landforms and topography.

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. Stressess practical skills.

4313  Remote Sensing
       (2-2) 3 hours credit. Prerequisite: GRG 2633 or GRG 3314.
       Introduction to the use of electromagnetic energy to sense objects in the natural and built environment;
interpretation and recognition of patterns detected by satellite and aircraft-born sensors. Application of
computer software to the analysis and interpretation of remotely-sensed information.
4911-3 Independent Study
1 to 3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student’s advisor, the Department Chair, 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 semester credit 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 and faculty supervisor. Supervised experience relevant to geography within selected community organizations. A maximum of 6 semester credit hours may be earned through the internship.

4953 Special Studies in Geography
(3-0) 3 hours credit. An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies may be repeated for credit when topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4993 Honors Thesis
3 hours credit. Prerequisites: Enrollment limited to candidates for Honors in Geography during the last two semesters; completion of honors examination and consent of the Honor College. 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 credit hours required for the Bachelor of Arts degree in Political Science, including the Core Curriculum requirements, is 120. Thirty-nine of the total semester credit hours required for the degree must be at the upper-division level.

All candidates for this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Arts degree in Political Science must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

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</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | **Mathematics** (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
**Science** (6 semester credit hours)  
Three hours from Level One and three hours from Level Two will satisfy this core requirement. |
Degree Requirements

A. 33 semester credit hours in the major, 21 of which must be at the upper-division level. Courses must be selected in the following manner:

1. 6 semester credit hours of courses selected from the following:

   POL 2503  Introduction to Political Theory
   POL 2513  Public Administration and Public Policy
   POL 2533  Introduction to Political Science
   POL 2603  International Politics
   POL 2623  Law and Society
   POL 2633  Comparative Politics

2. POL 2703  Scope and Methods of Political Science

3. 21 semester credit hours of political science electives, 18 of which must be at the upper-division level, with at least 3 hours in each of the following subfields (see list of courses by subfield on page 316):

   American politics
   Comparative politics
   International relations
   Political theory
   Public administration or public law

4. One senior-level seminar selected from the following:

   POL 4153  Seminar in Jurisprudence
   POL 4973  Seminar in Political Science
   Approved section of POL 4953 Special Studies in Political Science
B. 6 semester credit hours of courses in the social sciences outside the major, chosen with consent of the advisor.

C. 6 semester credit hours of a single language other than English.

D. 33 semester credit hours of electives.

**Minor in Political Science**

All students pursuing the Minor in Political Science must complete 18 semester credit hours, 12 of which must be upper-division.

A. 6 semester credit hours of lower-division courses selected from the following:

- POL 2503 Introduction to Political Theory
- POL 2513 Public Administration and Public Policy
- POL 2533 Introduction to Political Science
- POL 2603 International Politics
- POL 2623 Law and Society
- POL 2633 Comparative Politics
- POL 2703 Scope and Methods of Political Science

B. 12 upper-division semester credit hours. Students must take at least one upper-division class in three of the six subfields (see list of courses by subfield):

**American Politics**

- POL 3083 Ethnic Politics in the United States
- POL 3093 Mexican American Politics
- POL 3123 Political Psychology
- POL 3183 Women in Politics
- POL 3234 Political Campaigns and Elections
- POL 3244 Mass Media and Public Opinion
- POL 3253 Participation and American National Elections
- POL 3283 The American Presidency
- POL 3293 Political Movements
- POL 3303 Race, Ethnicity, and Public Policy
- POL 3313 The American Federal System
- POL 3363 Political Parties and Interest Groups
- POL 3373 The Legislative Process
- POL 3413 The Politics of Urban Development
- POL 3573 Politics of the Contemporary City

**Public Administration**

- POL 3603 Public Policy Formulation and Implementation
- POL 3613 Public Budgeting and Taxation
- POL 3623 Public Policy Evaluation
- POL 3703 Personnel Administration in the Public Sector
- POL 3713 Comparative Systems of Public Administration
- POL 3733 Urban Human Resources Policy
- POL 4323 Administrative Law
Public Law

POL  3013  The American Legal Process
POL  3023  Civil Liberties in American Law and Practice
POL  3223  Judicial Politics
POL  3323  Constitutional Law
POL  4123  Legal and Philosophical Reasoning
POL  4153  Seminar in Jurisprudence
POL  4323  Administrative Law

International Politics

POL  3483  Politics of the International Economy
POL  3503  American Foreign Policy since World War II
POL  3513  International Organizations
POL  3523  Force in International Politics
POL  3563  Current Issues in World Politics
POL  4103  Latin America and the World

Comparative Politics

POL  3213  Business and Politics in the Third World
POL  3353  Leadership and Elites
POL  3393  Latin American Politics
POL  3403  European Politics
POL  3423  Geopolitics of Russia and Eurasia
POL  3433  Governments and Politics of Southeast Asia
POL  3443  Governments and Politics of East Asia
POL  3453  The Politics of Mexico
POL  3463  Politics of the Third World
POL  3473  Theories and Problems in Latin American Politics
POL  3493  Politics of the Middle East
POL  3553  Social Policy in Modern Welfare States
POL  3633  Political Economy

Political Theory

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
POL  3163  Introduction to Feminist Theory
POL  3173  Women in Western Political Theory
POL  3193  Theories of Citizenship
POL  3333  Political Power

Internship hours cannot count toward the minor.

To declare a Minor in Political Science, obtain advice, or seek approval of substitutions for course requirements, students should consult the College of Liberal and Fine Arts Undergraduate Advising Center.
Minor in Public Administration

All students pursuing a Minor in Public Administration must complete 18 semester credit hours, 9 of which must be at the upper-division level.

A. 3 semester credit hours are required:

   POL  2513  Public Administration and Public Policy

B. 3 additional semester credit hours of research methods selected from the following:

   CRJ  3013  Research Methods in Criminal Justice
   ECO  3123  Forecasting Techniques in Business and Economics
   GRG  3323  Spatial Analysis
   POL  2703  Scope and Methods of Political Science
   SOC  3313  Conceptualization and Measurement in Sociology

C. 3 additional semester credit hours selected from the following:

   ECO  2003  Introduction to Political Economy*
   LGS  3013  Legal Research
   POL  2623  Law and Society
   POL  3023  Civil Liberties in American Law and Practice
   POL  3323  Constitutional Law
   POL  3633  Political Economy
   SOC  3173  Economy and Society

*May be used to satisfy the Core Curriculum requirement in Domain IID. If so, an additional 3 semester credit hours of free electives must be taken to meet the 120-semester-credit-hour minimum for the degree.

D. 9 additional semester credit hours selected from the following:

   IS   3003  Principles of Information Systems for Management
   MGT  3013  Introduction to Organization Theory, Behavior, and Management
   POL  3303  Race, Ethnicity, and Public Policy
   POL  3553  Social Policy in Modern Welfare States
   POL  3603  Public Policy Formation and Implementation
   POL  3613  Public Budgeting and Taxation
   POL  3623  Public Policy Evaluation
   POL  3703  Personnel Administration in the Public Sector
   POL  3713  Comparative Systems of Public Administration
   POL  3733  Urban Human Resources Policy
   POL  4323  Administrative Law
   SOC  3103  Complex Organizations

To declare a Minor in Public Administration, obtain advice, or seek approval of substitutions for course requirements, students should consult the College of Liberal and Fine Arts Undergraduate Advising Center.
Minor in International Studies

The Minor in International Studies offers students the opportunity to combine a major in a standard discipline with an interdisciplinary examination of the contexts and structures of relationships among nations.

All students pursuing a Minor in International Studies must complete 21 semester credit hours.

A. INS 2403 Introduction to International Study
B. 12 semester credit hours selected in the following manner:
   1. 3 semester credit hours of history or geography courses selected from the following:
      - GRG 1023 World Regional Geography
      - GRG 3613 Conservation of Resources
      - GRG 3633 Geography of Development
      - HIS 3283 Twentieth-Century Europe
      - HIS 3303 History of Mexico
      - HIS 3343 Modern Central America and the Caribbean
      - HIS 3353 Latin America since Independence
      - HIS 3373 Revolution in Latin America
      - HIS 3523 European Cultural History
      - HIS 3643 Modern Spain
      - HIS 3753 The Soviet Union and After
      - HIS 3823 History of American Foreign Policy
   2. 3 semester credit hours of economics, finance, or marketing selected from the following:
      - ECO 3193 The International Economy
      - ECO 4303 Economic Problems of Developing Countries
      - FIN 4613 Introduction to International Finance
      - MGT 4073 International Management
      - MKT 4073 International Marketing
   3. 3 semester credit hours of humanities selected from the following:
      - CSH 1203 Introduction to Hispanic Cultures
      - CSH 1213 Topics in World Cultures
      - FRN 3433 French Civilization
      - FRN 3613 Contemporary French Culture and Society
      - GER 4213 German Studies: Culture
      - HUM 2093 World Religions
      - HUM 3623 Topics in National Cultures and Civilizations
      - PHI 3073 Asian Philosophy
      - SPN 3613 Spanish Culture and Civilization
      - SPN 3623 Latin American Culture and Civilization
      - SPN 3653 Contemporary Spain
      - SPN 3663 Contemporary Latin America
      - SPN 3673 Hispanic Cultural Systems
   4. 3 semester credit hours of social sciences selected from the following:
      - ANT 3363 Indians of Mesoamerica
      - ANT 4263 Social and Cultural Change
      - CRJ 4733 Intelligence Programs and National Security
INS 4953 Special Studies in International Studies
POL 2603 International Politics
POL 2633 Comparative Politics
POL 3393 Latin American Politics
POL 3403 European Politics
POL 3423 Geopolitics of Russia and Eurasia
POL 3433 Governments and Politics of Southeast Asia
POL 3443 Governments and Politics of East Asia
POL 3453 The Politics of Mexico
POL 3463 Politics of the Third World
POL 3473 Theories and Problems in Latin American Politics
POL 3483 Politics of the International Economy
POL 3493 The Politics of Mexico
PSY 3053 Cross-Cultural Psychology

C. 6 additional semester credit hours, selected from any two of the sections from B.1 through B.4

D. Four college semesters or the equivalent in a single foreign language

To declare a Minor in International Studies, obtain advice, or seek approval of substitutions for course requirements, students should consult the College of Liberal and Fine Arts Undergraduate Advising Center.

COURSE DESCRIPTIONS
INTERNATIONAL STUDIES
(INS)

2403 Introduction to International Study
(3-0) 3 hours credit.
Examination of international and multicultural issues through the perspectives of core disciplines. Study includes lectures, discussions, reading and films on culture, culture shock, and cross-cultural communication; American and foreign values; language issues; and investigations of issues related to a particular nation and culture. (Formerly INT 2403. Credit cannot be earned for both INS 2403 and INT 2403.)

4913 Independent Study
3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the Department Chair 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.

4953 Special Studies in International Studies
(3-0) 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 may be repeated for credit when topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree. (Formerly INT 4953.)
COURSE DESCRIPTIONS
POLITICAL SCIENCE
(POL)

1013  Introduction to American Politics
(3-0) 3 hours credit.
A broad survey of the basic elements of American and Texas politics. Attention is given to the normative and Constitutional foundations of the political culture, the development of major governmental institutions, political organizations and processes, and major policy outputs. (Formerly POL 1053. Credit cannot be earned for both POL 1013 and POL 1053.) [TCCN: GOVT 2301.]

1133  Texas Politics and Society
(3-0) 3 hours credit.
Topics may include discussions of the Texas and U.S. Constitutions; the role of state in the federal system; the diverse demographic, economic, and cultural bases of state politics; elections, interest groups, and elites; and legislative, executive, judicial, urban, and county politics. [TCCN: GOVT 2306.]

1213  Topics in Texas and American Politics
(3-0) 3 hours credit.
An examination of a selection of specific topics or set of issues in Texas and American politics. May be repeated for credit when topics vary, not to exceed 9 semester credit hours. (Credit cannot be earned for POL 1023, POL 1063, POL 1083, POL 1173, or POL 2023, and sections of POL 1213 on the same topic.) [TCCN: GOVT 2302.]

Some topics may include:

The Politics of the American Economy
Theory and practice of classical and modern political economy. Historical interaction between American capitalism and political structures, processes, and public policy. Topics may include current fiscal, monetary, and other regulatory policies in economic context.

Ethics in America
This topic examines some of the central ethical theories throughout history, including virtue-based ethics, rights-based ethics, utilitarianism and feminist ethics. Particular attention will be paid to the application of ethical theories to contemporary topics such as environmentalism, animal rights, abortion, affirmative action and biotechnology. Writers examined may include Plato, Immanuel Kant, John Stuart Mill, Carol Gilligan and Peter Singer.

The United States in the World
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.

States, Communities, and Public Policy
This course presents basic state and local political structures and processes, placing Texas in a broader comparative framework. Its principal emphasis is on the social and economic policies involving both federal and state or local components.

Civil Rights
This course explores the politics of civil rights in the U.S. and Texas, giving special attention to the federal and state constitutions. The course includes theoretical, empirical, legal, and historical analyses and examines civil rights in general with special emphasis on Latinos, African Americans, and women.

2503  Introduction to Political Theory
(3-0) 3 hours credit. Prerequisite: POL 1013.
The fundamental concepts and problems of politics as viewed by the classical political philosophers and contemporary theorists: justice, power, authority, obligation, freedom, and equality.
2513 Public Administration and Public Policy (3-0) 3 hours credit. Prerequisite: POL 1013.
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. [TCCN: GOVT 2304.]

2603 International Politics (3-0) 3 hours credit. Prerequisite: POL 1013.
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: POL 1013.
An examination of the nature of law, its role in sociopolitical systems, and the institutional components of legal systems. Various theories and systems of law are examined. Possible topics can be drawn from general areas of legal study such as legal philosophy, critical legal studies, and comparative law, as well as from specific subject areas such as natural, constitutional, common, civil, customary, socialist, and theocratic law.

2633 Comparative Politics (3-0) 3 hours credit. Prerequisite: POL 1013.
A comparative examination of the diverse forms, goals, styles, and practices of government in democratic and authoritarian states. Several major polities will be studied in detail.

2703 Scope and Methods in Political Science (3-0) 3 hours credit. Prerequisite: POL 1013.
An introduction to methods of conducting and interpreting research in political science. Topics include principles of the philosophy of science; research designs, statistical concepts and techniques (conceptualization, operationalization, and measurement), and data-gathering procedures; data analysis; and qualitative methods. May also include standard computer packages and secondary data analysis. (Formerly SSC 3013. Credit cannot be earned for both POL 2703 and SSC 3013.)

3013 The American Legal Process (3-0) 3 hours credit. Prerequisite: POL 1013.
An introduction to how the United States legal system is organized and functions. A broad overview of the system and its actors is combined with a focus on particular areas of the law such as domestic relations, personal injury liability litigation, criminal procedure, and alternative dispute resolution.

3023 Civil Liberties in American Law and Practice (3-0) 3 hours credit. Prerequisite: POL 1013.
An analytical, normative, and empirical examination of civil liberties and rights in the United States. Topics may include freedom of speech, religion, and assembly, equal protection of the laws, due process, and privacy. (Formerly POL 2023. Credit cannot be earned for both POL 3023 and POL 2023.)

3083 Ethnic Politics in the United States (3-0) 3 hours credit. Prerequisite: POL 1013.
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: POL 1013.
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: POL 1013.
This course is an examination of the political ideologies that shape contemporary political debate. Ideologies may include liberalism, libertarianism, socialism, communitarianism, neo-conservatism, feminism, environmentalism, and critical race perspectives. Authors may include Marx, Mill, Rawls, Nozick, Sandel, MacKinnon, and others.

3113 American Political Theory
(3-0) 3 hours credit. Prerequisite: POL 1013.
The political theory of the Constitution, the Federalist Papers, Adams, Jefferson, Paine, Calhoun, Thoreau, Social Darwinism, Pragmatism, and twentieth-century political thought.

3123 Political Psychology
(3-0) 3 hours credit. Prerequisite: POL 1013.
Political psychology seeks to explain the behavior of political leaders and mass publics by focusing on the psychological underpinnings of such behavior–their personalities, identities, values, attitudes, and feelings. Attention will be given to the interaction of these factors within different political environments. Topics may include political socialization; personality and political leadership; the psychology of small group decision-making; the psychology of mass participation; and affect and cognition in political judgement.

3133 Political Philosophy: Ancient and Medieval
(3-0) 3 hours credit. Prerequisite: POL 1013.
The major works of Western political philosophy from ancient times to the Renaissance. Writers examined may include Plato, Aristotle, Thucydides, Augustine, and Machiavelli.

3143 Political Philosophy: Modern
(3-0) 3 hours credit. Prerequisite: POL 1013.
The major works of political philosophy from the Renaissance to the nineteenth century. Writers examined may include Hobbes, Locke, Rousseau, Hegel, Marx, and Mill.

3153 Political Philosophy: Contemporary
(3-0) 3 hours credit. Prerequisite: POL 1013.
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, and contemporary ethics.

3163 Introduction to Feminist Theory
(3-0) 3 hours credit. Prerequisite: POL 1013.
A reading-intensive upper-level lecture course for political science majors and women’s studies minors, introducing students to feminist approaches to theory. Covers feminist critiques of some of the dominant traditions in Western political and social theory as well as ways in which women have begun to construct theories from their own distinctive perspectives within the intersecting hierarchies of race, class, and gender.

3173 Women in Western Political Theory
(3-0) 3 hours credit. Prerequisite: POL 1013.
A reading-intensive upper-level lecture course for political science majors and women’s studies minors. Introduces students to classical discussions within the Western political theory tradition through an inquiry into their conceptions of women. The course will consider conceptions of women, the family, and the domestic sphere as they have come to us through a male-centered philosophical tradition.
3183 **Women in Politics**  
(3-0) 3 hours credit. Prerequisite: POL 1013.  
An examination of the roles and forms of participation of women in contemporary American politics. Topics may include the fight for civil rights and equality; media portrayals of women in politics; women as candidates and as voters; women as elected officials, activists, and political professionals; and women in the military, including theories of gender and war.

3193 **Theories of Citizenship**  
(3-0) 3 hours credit. Prerequisite: POL 1013.  
A political philosophy approach to the concept of citizenship. The philosophical underpinnings of citizenship will be analyzed in this class from a race, class, gender, and gay perspective. The notion of nation-states and their exclusive and arbitrary standards of what rights belong to people and to which people will be examined and at times challenged in the context of contemporary politics, American as well as global. In this examination the discussion will go beyond rights and into process. In other words, citizenship will be examined from a participatory, as well as rights, perspective.

3213 **Business and Politics in the Third World**  
(3-0) 3 hours credit. Prerequisite: POL 1013.  
Business-government relations in Third World nations at a time of deep policy changes initiated in the 1980’s. Major theories of business-government relations and their explanatory validity for Third World nations. Particular emphasis may be given to Latin America and Asia and their dynamic emerging markets.

3223 **Judicial Politics**  
(3-0) 3 hours credit. Prerequisite: POL 1013.  
Political behavior of the major participants in the judicial process: judges, attorneys, juries, defendants, and litigants; the political and administrative context of the judicial process; judicial-executive and judicial-legislative relations; the impact of court decisions.

3234 **Political Campaigns and Elections**  
(3-2) 4 hours credit. Prerequisite: POL 1013.  
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. Three lecture and two laboratory hours per week. (Formerly POL 3233. Credit can be earned for both POL 3234 and POL 3233 with special permission.)

3244 **Mass Media and Public Opinion**  
(3-2) 4 hours credit. Prerequisite: POL 1013.  
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 3243 and POL 3253. Credit cannot be earned for both POL 3244 and either POL 3243 or POL 3253.)

3253 **Participation and American National Elections**  
(3-0) 3 hours credit.  
An introduction to fundamentals of American electoral politics. Topics will include psychological/sociological and economic models of participation, the presidential primary process, the effectiveness of presidential and congressional campaigns on the vote, psychological/sociological and economic models of the presidential and congressional vote, the incumbency advantage in congressional elections, spending in congressional elections, candidate entry, and comparison of House and Senate elections.

3283 **The American Presidency**  
(3-0) 3 hours credit. Prerequisite: POL 1013.  
The U.S. president’s role in the American political system. Topics may include the constitutional framework and historical development of presidential powers, presidential personality, and legislative, foreign policy, and war-making powers.
3293 Political Movements
(3-0) 3 hours credit.
Examines the history, political dynamics, and social basis of mass political movements as vehicles for social reform. Selected examples may include the civil rights, labor, women’s, abolitionist, temperance, antiabortion, old age pension, and antiwar movements.

3303 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 on social, political, and economic strategies for the elimination of minority poverty in the United States. (Formerly SSC 3253. Credit cannot be earned for both POL 3303 and SSC 3253.)

3313 The American Federal System
(3-0) 3 hours credit. Prerequisite: POL 1013.
The political theory of federalism; the constitutional provisions; interstate coordination of policies; local-state-federal relations; the political role of private and public interest within the federal framework.

3323 Constitutional Law
(3-0) 3 hours credit. Prerequisite: POL 1013.
An examination of major constitutional issues, past and present, through the intensive study of leading cases. Recommended for pre-law students.

3333 Political Power
(3-0) 3 hours credit. Prerequisite: POL 1013.
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 resources into political power.

3353 Leadership and Elites
(3-0) 3 hours credit. Prerequisite: POL 1013.
An examination of national political executives in parliamentary and presidential democracies and in authoritarian states. Topics examined may include the selection process, decision-making, leadership and bureaucracy, executive-legislative relations, and neo-corporatism.

3363 Political Parties and Interest Groups
(3-0) 3 hours credit. Prerequisite: POL 1013.
The purposes of political parties in the political process. Interest groups and their roles in government and public policy.

3373 The Legislative Process
(3-0) 3 hours credit. Prerequisite: POL 1013.
The functions, structures, and politics of legislatures and their relationships to their constituencies and other branches of government.

3393 Latin American Politics
(3-0) 3 hours credit. Prerequisite: POL 1013.
An examination of political institutions and their relationship to social and economic change in Latin America. Profiles of major Latin American countries, such as Mexico, Brazil, Argentina, Peru, and Cuba.

3403 European Politics
(3-0) 3 hours credit. Prerequisite: POL 1013.
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: POL 1013. 
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, and intergovernmental rivalry. Case studies may be drawn from societies other than the United States.

3423 Geopolitics of Russia and Eurasia  
(3-0) 3 hours credit. Prerequisite: POL 1013. 
Multidisciplinary introduction and regional study of the Russian Federation and the Eurasian realm, including the Caucasus, Central Asian nations, Afghanistan, and Mongolia. Both the geography and the politics of this area will be analyzed. Historical and contemporary geopolitical topics include nation-building, regional civilizations, revolution, terrorism, the nineteenth century “Great Game,” the rise of the USSR, and the current transition of the Russian Federation to an uncertain future. (Same as GRG 3423. Credit cannot be earned for both POL 3423 and GRG 3423.)

3433 Governments and Politics of Southeast Asia  
(3-0) 3 hours credit. Prerequisite: POL 1013. 
A comparative examination of the political systems of selected Southeast Asian countries and their efforts to deal with political, economic, and social change. Countries studied may include Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam.

3443 Governments and Politics of East Asia  
(3-0) 3 hours credit. Prerequisite: POL 1013. 
A comparative examination of the political systems of selected East Asian countries and their efforts to deal with problems of political, economic, and social change. Countries studied may include the People's Republic of China, the Republic of China, and South Korea. (Formerly titled “Asian Politics”; credit cannot be earned for both.)

3453 The Politics of Mexico  
(3-0) 3 hours credit. Prerequisite: POL 1013. 
Background to the 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: POL 1013. 
The political system of various Third World nations. An inquiry into the political and economic problems of these countries, such as development, instability, and political change.

3473 Theories and Problems in Latin American Politics  
(3-0) 3 hours credit. Prerequisite: One of the following: POL 3393, POL 3453, HIS 2533; or consent of instructor. 
Advanced survey of major theories and 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, and the military in politics.

3483 Politics of the International Economy  
(3-0) 3 hours credit. Prerequisite: POL 1013. 
Demonstrates the linkage between politics and economics. Students will be introduced to the international economic system as well as controversies, money and trade, foreign aid, and governance.
3493 **Politics of the Middle East**  
(3-0) 3 hours credit. Prerequisite: POL 1013.  
An examination of past, present, and future of Middle East politics, with an emphasis on culture, politics, religion, and conflicts in the area; the international relations of Middle Eastern countries as well as superpowers’ involvement.

3503 **American Foreign Policy since World War II**  
(3-0) 3 hours credit. Prerequisite: POL 1013.  
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: POL 1013.  
Major issues involving international organizations: nationalism and globalism; financing problems; international staffing; voting patterns; peace-keeping; and international conferences. Organizations 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: POL 1013.  
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.

3553 **Social Policy in Modern Welfare States**  
(3-0) 3 hours credit. Prerequisite: POL 1013.  
History and development of social policies in modern societies. Policy areas covered may include Social Security, health care, poverty and income maintenance, housing, education, employment, and child care.

3563 **Current Issues in World Politics**  
(3-0) 3 hours credit. Prerequisite: POL 1013.  
An examination of the issues that 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 (Formerly POL 2083. Credit cannot be earned for both POL 2083 and POL 3563).

3573 **Politics of the Contemporary City**  
(3-0) 3 hours credit.  
An introduction to urban America from a multidisciplinary perspective. Attention is given to the economic, social, political, and environmental factors that have produced the physical form and institutional arrangements of the contemporary city. Problems and opportunities currently facing American cities. (Formerly SSC 3113. Credit cannot be earned for both POL 3573 and SSC 3113.)

3603 **Public Policy Formulation and Implementation**  
(3-0) 3 hours credit. Prerequisite: POL 1013.  
An analysis of public policy formulation and implementation in 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: POL 1013.  
An examination of the process and politics of public budgeting and taxation, and of the bureaucratic behavior accompanying them.
3623  **Public Policy Evaluation**  
(3-0) 3 hours credit. Prerequisite: POL 1013.  
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.

3633  **Political Economy**  
(3-0) 3 hours credit. Prerequisite: POL 1013  
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 institutional foundations of market societies, ethical and legal impact of business practices, comparisons of national economic policies, the interaction of modern government and economic activity, and the impact of markets on concepts of public and private life.  
(Formerly SSC 3303. Credit cannot be earned for both POL 3633 and SSC 3303.)

3703  **Personnel Administration in the Public Sector**  
(3-0) 3 hours credit. Prerequisite: POL 1013.  
A survey of personnel management in the public sector. Topics examined may include recruitment, civil service and patronage appointments, career development, personnel utilization, conflict of interest questions, employee organization and relations, and affirmative action.

3713  **Comparative Systems of Public Administration**  
(3-0) 3 hours credit. Prerequisite: POL 1013.  
Administrative goals, structures, processes, and behavior in comparative perspective. Bureaucracies in Western democratic, Communist, and developing political systems will be examined.

3733  **Urban Human Resources Policy**  
(3-0) 3 hours credit. Prerequisite: POL 1013.  
Explores the basic relationships between government, citizens, and the political forces that affect government. The personnel 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.

4103  **Latin America and the World**  
(3-0) 3 hours credit. Prerequisite: One of the following: POL 3393, POL 3453, POL 3473, HIS 2533; or consent of instructor.  
Advanced study of the past, present, and future roles of Latin America in the world arena. An examination of relations between Latin America and other Third World nations, countries of the Pacific Basin, the United States, and Canada.

4123  **Legal and Philosophical Reasoning**  
(3-0) 3 hours credit.  
An intensive analysis of selected philosophical texts focusing on law and justice. Students are challenged to develop critical reading and thinking skills by studying the texts of philosophers such as Plato, Aristotle, Dworkin, Hart and/or others who outline difficult arguments and unfamiliar ideas. Emphasis is placed on drawing reasoned conclusions, advocating positions, and expressing oneself in oral and written forms.  
(Same as LGS 4123. Credit cannot be earned for both POL 4123 and LGS 4123.)

4153  **Seminar in Jurisprudence**  
(3-0) 3 hours credit. Prerequisite: POL 1013.  
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 1013.  
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.
4703 Advanced Scope and Methods
(3-0) 3 hours credit. Prerequisite: POL 2703. (Completion of POL 2703 with a “C” or better is recommended.)
An examination of modes of inquiry in political science. After an introduction to basic issues in the philosophy of science (e.g., discovery, explanation, theory, differences between the natural and social sciences, etc.), special emphasis will be given to the examination of a variety of investigatory approaches in political science (e.g., the institutional approach, the behavioral approach, rational choice theory, etc.), and a variety of methodological issues germane to investigation in political science (e.g., qualitative analysis, quantitative analysis, comparative analysis).

4911-3 Independent Study
1 to 3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student’s advisor, the Department Chair, 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 semester credit 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 semester credit hours may be earned through the internship.

4953 Special Studies in Political Science
(3-0) 3 hours credit. Prerequisite: POL 1013.
An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Studies may be repeated for credit when topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4973 Seminar in Political Science
(3-0) 3 hours credit. Prerequisites: POL 1013 and 18 semester credit hours in POL or consent of instructor.
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. Enrollment limited to juniors and seniors majoring in political science.

4993 Honors Thesis
3 hours credit. Prerequisites: Enrollment limited to candidates for Honors in Political Science during the last two semesters; completion of honors examination and consent of the Honors College.
Supervised research and preparation of an honors thesis. May be repeated once with advisor’s approval.
DEPARTMENT OF PSYCHOLOGY

DEPARTMENT HONORS

The Department of Psychology awards Honors in Psychology to certain of its outstanding students and provides the opportunity for advanced study under close faculty supervision.

Selection of students for honors designation is based on the student’s academic performance and recommendation by the faculty in the student’s major discipline. To be eligible for the program, students must have a minimum overall grade point average of 3.0 at UTSA and a minimum grade point average of 3.5 in Psychology at UTSA. The minimum grade point averages must be maintained for students to receive the approval of the department faculty. Students applying for Honors in Psychology are expected to enroll in the appropriate honors thesis course during their final two semesters. The completed thesis must be approved by the supervising faculty sponsor and another departmental faculty member.

Students interested in this program should contact their faculty advisors for additional information.

Bachelor of Arts Degree in Psychology

The minimum number of semester credit hours required for this degree, including the Core Curriculum requirements, is 120. Thirty-nine of the total semester credit hours required for the degree must be at the upper-division level.

All candidates for this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Arts degree in Psychology must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
                            ENG 1013 Freshman Composition  
                            ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | **Mathematics** (3 semester credit hours)  
                            Any three hours listed under this section in the list of core courses will satisfy this core requirement. Psychology majors are encouraged to choose MAT 1023, MAT 1033, or MAT 1073 to satisfy this core requirement.  
                            **Science** (6 semester credit hours)  
                            Three hours from Level One and three hours from Level Two will satisfy this core requirement. |
Degree Requirements

A. 36 semester credit hours in the major, 24 of which must be at the upper-division level:

1. 12 semester credit hours of lower-division courses:
   a. PSY 1013 Introduction to Psychology
   b. 6 semester credit hours selected from the following:
      PSY 2503 Developmental Psychology
      PSY 2513 Abnormal Psychology
      PSY 2523 Personality
      PSY 2533 Social Psychology
   c. 3 semester credit hours selected from the following:
      PSY 2543 Theories of Learning
      PSY 2573 Psychology of Thought

2. 24 semester credit hours of upper-division courses:
   a. PSY 3403 Experimental Psychology
      PSY 3413 Experimental Psychology Laboratory
   b. 6 semester credit hours selected from the following:
      PSY 3103 Cognition
      PSY 3153 Sensation and Perception
      PSY 4113 Cognitive Development

Domain II: Society and Culture

United States History and Diversity (6 semester credit hours)
   Any six hours listed under this section in the list of core courses will satisfy this core requirement.

Political Studies (6 semester credit hours)
   POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.

Social and Behavioral Sciences (3 semester credit hours)
   PSY 1013 Introduction to Psychology

Economics (3 semester credit hours)
   Any three hours listed under this section in the list of core courses will satisfy this core requirement.

Domain III: Literature and the Arts

Literature (3 semester credit hours)
   Any three hours listed under this section in the list of core courses will satisfy this core requirement.

The Arts (3 semester credit hours)
   Any three hours listed under this section in the list of core courses will satisfy this core requirement.

Domain IV: Interdisciplinary Studies

(3 semester credit hours)
   Any three hours listed under this section in the list of core courses will satisfy this core requirement.
c. 12 semester credit hours of upper-division courses in psychology. No more than 3 hours of Independent Study, Internship in Psychology, or Honors Thesis may be counted toward this requirement.

B. 12 semester credit 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 faculty advisor. A list of the sets of courses that meet this requirement is available from the student’s academic advisor. This requirement may be satisfied by completing a minor outside psychology.

C. STA 2073 Statistics for Psychology or approved substitute (Prerequisites: MAT 1023, MAT 1033, or MAT 1073, and one psychology course)

NOTE: Requirement C must be satisfied before enrolling in PSY 3403 and PSY 3413 and should be completed during the freshman or sophomore year.

D. 27 semester credit hours of electives

### Minor in Psychology

All students pursuing a Minor in Psychology must complete 18 semester credit hours.

A. 6 semester credit hours of required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 1013</td>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td>PSY 3403</td>
<td>Experimental Psychology</td>
</tr>
</tbody>
</table>

(This course may be used to satisfy the Core Curriculum requirement in Domain IIC.)

B. 3 additional semester credit hours selected from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>PSY 2503</td>
<td>Developmental Psychology</td>
</tr>
<tr>
<td>PSY 2513</td>
<td>Abnormal Psychology</td>
</tr>
<tr>
<td>PSY 2523</td>
<td>Personality</td>
</tr>
<tr>
<td>PSY 2533</td>
<td>Social Psychology</td>
</tr>
</tbody>
</table>

C. 3 additional semester credit hours selected from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 2543</td>
<td>Theories of Learning</td>
</tr>
<tr>
<td>PSY 2573</td>
<td>Psychology of Thought</td>
</tr>
</tbody>
</table>

D. 6 additional upper-division semester credit hours of psychology courses, no more than 3 of which may be in Independent Study or Internship

To declare a Minor in Psychology, obtain advice, or seek approval of substitutions for course requirements, students should consult the undergraduate advisor in the College of Liberal and Fine Arts Advising Center.
COURSE DESCRIPTIONS

PSYCHOLOGY
(PSY)

1013  Introduction to 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. Psychological, social, cultural, and biological determinants of behavior are considered, together with applications of basic principles. Scientific and nonscientific approaches to the explanation of psychological phenomena are examined critically. Participation in illustrative research required. (Formerly PSY 2013. Credit may be earned for only one of the following: PSY 1013, PSY 2013, or PSY 1203.) [TCCN: PSYC 2301.]

1513  Knowledge and Learning  
(2-2) 3 hours credit. Does not substitute for PSY 1013 for psychology majors and minors.  
Models of cognitive skill acquisition derived from research on human information processing are presented and evaluated. Lectures will focus on theoretical bases for individual differences in cognitive performance. Laboratory exercises will focus on the empirical evaluation of effectiveness of different cognitive strategies for carrying out academic tasks.

2001  Careers and Training in Psychology  
(1-0) 1 hour credit. Prerequisite: PSY 1013 or equivalent.  
Explores career opportunities in Psychology relative to Bachelor's, Master's, and Doctoral levels of training. Students learn how best to plan their program of studies to achieve their educational and occupational goals. The different types of graduate programs in Psychology are described and the admissions process is considered in light of the most effective strategies for gaining entrance and assuring success. Must be taken on a credit/no-credit basis.

2503  Developmental Psychology  
(3-0) 3 hours credit. Prerequisite: PSY 1013.  
Problems, methods, major theories, and results in the study of the psychological development of the individual from the prenatal period to old age. [TCCN: PSYC 2314.]

2513  Abnormal Psychology  
(3-0) 3 hours credit. Prerequisite: PSY 1013.  
Topics may include the 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 1013.  
Problems, methods, major theories, and results in the study of development and maintenance of typical modes of behavior and dynamics of adjustment. [TCCN: PSYC 2316.]

2533  Social Psychology  
(3-0) 3 hours credit. Prerequisite: PSY 1013.  
Problems, methods, major theories, and results in the study of social interaction and interpersonal influence; self-identity, attitudes, role behavior, social perception, social influence, and behavior within groups. [TCCN: PSYC 2319.]

2543  Theories of Learning  
(3-0) 3 hours credit. Prerequisites: PSY 1013 or equivalent and MAT 1023 or equivalent.  
An examination of major theories about the nature of the learning process. Discussion will focus on the construction and evaluation of models of learning. The practical and theoretical implications of research results for the acquisition, maintenance, modification, and elimination of behavior will be considered. Related memory phenomena and theories may be discussed.
2573  Psychology of Thought
(3-0) 3 hours credit. Prerequisites: PSY 1013 or equivalent and MAT 1023 or equivalent.
An introduction to the principles of human thought as they relate to memory, comprehension, and problem solving. These principles will be used to analyze the nature of the cognitive strategies and skills that individuals develop to cope with the adaptive challenges they face.

3013  Psychological Measurement
(3-0) 3 hours credit. Prerequisites: PSY 1013 and STA 2073 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. Prerequisites: PSY 2533 and PSY 3403 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. Prerequisite: PSY 1013 ANT 1013, or ANT 2053.
An examination of the role of culture in the development and validation of psychological theories. Critical discussion of the application of theories of human behavior developed in the United States and Western Europe to other cultural groups, including ethnic minority subgroups. Topics may include identity formation, cognitive and personality development, social and organizational behavior, inter-group relations, psychological assessment, and mental health.

3063  Psychological Testing
(3-0) 3 hours credit. Prerequisite: PSY 3403 or the equivalent.
An introduction to the development, interpretation, and administration of psychological tests.

3103  Cognition
(3-0) 3 hours credit. Prerequisites: PSY 3403 and one of the following: PSY 2543 or PSY 2573.
Examination of current information-processing models of human cognition. Emphasis will be placed on the processes by which stimuli are identified, by which past information is retrieved and used, and by which one’s knowledge is modified.

3113  Motivation and Emotion
(3-0) 3 hours credit. Prerequisites: PSY 2533, PSY 2543, or consent of instructor.
Topics may include examination of biological, physiological, learning, psychodynamic, cognitive, and purposive factors in the motivation of human behavior. Includes examination of nature and roles 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.

3133  Contemporary Personality Research
(3-0) 3 hours credit. Prerequisite: PSY 2523 or consent of instructor.
Examination of current theory and research on the processes underlying personality and individual differences. Topics may include temperament and biological mechanisms, self-concepts and their relationship to behavior, and cognitive processes underlying behavior consistency and emotional experience.

3153  Sensation and Perception
(3-0) 3 hours credit. Prerequisites: PSY 3403 and either PSY 2543 or PSY 2573.
Survey of the processes by which the information available in the physical world is encoded and transformed to produce our perception of the world. Emphasis on the interaction between data-driven and conceptually-driven processes. Topics may include elementary sensory physiology, pattern recognition, illusions, physiological bases of perceptual dysfunction, and perceptual development. (Formerly PSY 2553. Credit cannot be earned for both PSY 3153 and PSY 2553.)
3203 Industrial and Organizational Psychology
(3-0) 3 hours credit. Prerequisites: STA 2073 or an equivalent, and upper-class 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. Prerequisite: PSY 2503, PSY 2513, PSY 2523, or PSY 2533.
Consideration of physiological and social-learning origins of sex differences and psychological theories of sex-stereotyped and sexual behavior. Topics may include androgyny versus 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: One course from PSY 2503, PSY 2513, PSY 2523, or PSY 2533; PSY 2543 or PSY 2573; a minimum grade of “C” in STA 2073 or consent of instructor; and 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.

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.

3513 Psychopathology and Childhood
(3-0) 3 hours credit. Prerequisite: PSY 2513.
Clinical findings and experimental research regarding childhood behavior problems, including hyperactivity, autism, schizophrenia, and anxiety disorders. Additional topics include family influences on development of abnormal behavior and various psychotherapeutic techniques.

3523 Psychology of Adulthood and Aging
(3-0) 3 hours credit. Prerequisite: PSY 2503 or consent of instructor.
Descriptive and theoretical accounts of psychological developments from early adulthood to old age. Relevant data are reviewed in the areas of memory, intellect, mental and physical health, social development, personality, grief, and dying.

3543 Introduction to Clinical Psychology
(3-0) 3 hours credit. Prerequisites: PSY 2513 and PSY 3403, or consent of instructor.
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.

3633 Aggression
(3-0) 3 hours credit. Prerequisite: PSY 1013 or consent of instructor.
Survey of social and psychological data; findings and theory of aggression for both human and nonhuman subjects.

3903 Advanced Psychological Research
(2-2) 3 hours credit. Prerequisite: PSY 3403 or the equivalent.
Provides the opportunity for the student to conduct current research in a subarea of psychology under the instructor’s supervision. Lectures will include a review of previous research in the subarea 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 3403 and PSY 3413; or consent of instructor.
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.

4013 Social Psychology of the Self
(3-0) 3 hours credit. Prerequisites: PSY 2523 or PSY 2533, and PSY 3403 or consent of instructor.
A social psychological examination of current research on the self in social interaction. Topics may include the
structure of the self-concept and strategies for the preservation of self-esteem; the evaluation of the self through
social comparison; the search for meaning and processes involved in understanding the self; and individual
differences in self-knowledge and self-presentational styles. (Formerly PSY 3143. Credit cannot be earned for
both PSY 4013 and PSY 3143.)

4103 Social Psychology of Prejudice
(3-0) 3 hours credit. Prerequisite: PSY 2533 and PSY 3403.
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. Prerequisites: PSY 2503, PSY 2573, and PSY 3403; 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 the validity of the concept of cognitive stages, particularly Piagetian
models.

4133 Social and Personality Development
(3-0) 3 hours credit. Prerequisite: PSY 2503, PSY 2523, or PSY 2533.
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.

4143 Memory
(3-0) 3 hours credit. Prerequisites: PSY 3403 or an equivalent and one of the following: PSY 2543 or PSY 2573,
or consent of instructor.
Models for the coding, storage, and retrieval of information in memory. Organization and structure of short-term,
long-term, and semantic memory, and the role of verbalization and images in memory.

4163 Sensory Processes
(3-0) 3 hours credit. Prerequisite: PSY 3153 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 1013 or consent of instructor.
Topics may include the biological and 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.

4193 Relationships
(3-0) 3 hours credit. Prerequisites: PSY 2533 and PSY 3403.
A consideration of the psychological processes that underlie the development and maintenance of social
relationships. Emphasis on motivational and cognitive factors that mediate social interaction and
communication. Special attention may be given to friendships, romantic relationships, successful marriages, and
distressed relationships. (Credit cannot be earned for both PSY 4193 and PSY 4203.)
4213 Social Cognition  
(3-0) 3 hours credit. Prerequisite: PSY 3403 or an equivalent; PSY 2533 or PSY 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 personal perception processes.

4253 Psychology and Health  
(3-0) 3 hours credit. Prerequisite: Upper-class 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 
ilness, 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.

4273 Styles of Thought  
(3-0) 3 hours credit. Prerequisites: PSY 3403 or an equivalent; PSY 2573 or PSY 3103. 
Study of the various ways individuals 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.

4293 Visual Information Processing  
(3-0) 3 hours credit. Prerequisite: PSY 3153 or consent of instructor. 
Focus on the acquisition, storage, and use of visual information. Topics will include visual pattern recognition, 
models of visual attention, analog representations in memory, and spatial cognition.

4303 Psychology and the Law  
(3-0) 3 hours credit. Prerequisite: 12 semester credit hours of undergraduate psychology credit. 
Emphasis on the contributions of psychology to the understanding of the legal system and criminal behavior. 
Topics may include cognitive and social psychological factors in eyewitness testimony, jury selection and 
decision making, competence and the insanity defense, prediction of criminal behavior and dangerousness, lie 
detection and hypnosis, and sentencing.

4313 Psychology and Leadership  
(3-0) 3 hours credit. Prerequisites: MGT 3013 and MS 1013; or PSY 3403; or consent of instructor. 
Examination of individual differences and environmental influences on leadership. Primary emphasis will be on 
leadership in a work setting. Topics may include traditional and contemporary theoretical perspectives on 
leadership and cross-cultural issues.

4323 Psychology of Language  
(3-0) 3 hours credit. Prerequisites: PSY 3403 and either PSY 2543 or PSY 2573. 
Investigates how humans represent, produce, understand and acquire language. Topics may include language 
processing, neurolinguistics, language acquisition, conversational interaction, language disorders, and reading 
development. (Formerly PSY 2583. Credit cannot be earned for both PSY 4323 and PSY 2583.)

4333 The Perception of Sound  
(3-0) 3 hours credit. Prerequisite: PSY 3153. 
An examination of how we experience sound. Topics may include auditory psychophysics, auditory speech 
pattern perception, and the perception of complex sequences including music and speech.

4911,3 Independent Study  
1 or 3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student’s advisor, 
the Department Chair 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 semester credit hours of independent study, regardless of discipline, will 
apply to a bachelor’s degree. No more than 3 semester credit hours of independent study will apply toward 
psychology major or minor requirements.
4923  **Current Topics in Psychology**  
(3-0) 3 hours credit. Prerequisites: PSY 1013 and PSY 3403.  
Coverage of topics of current interest in the field of psychology. May be repeated once for credit when topics vary,  
but no more than 3 semester credit hours will apply toward the major in psychology.

4933,6  **Internship in Psychology**  
3 or 6 hours credit. Prerequisite: Consent of internship coordinator before registration.  
Supervised experience relevant to psychology within selected community organizations. A maximum of 6 semester  
credit hours may be earned through Internship in Psychology. No more than 3 semester credit hours will apply toward  
psychology major or minor requirements. Must be taken on a credit/no-credit basis.

4953  **Special Studies in Psychology**  
(3-0) 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 may be repeated for credit when the topics vary, but not more than 6  
semester credit 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 semester credit hours will apply toward psychology major requirements.
DEPARTMENT OF SOCIOLOGY

The Department of Sociology offers a Bachelor of Arts degree in Sociology. The department also offers a minor in Sociology.

At least 33 semester credit hours of coursework are required to fulfill a Sociology major. The 33-hour total is considered a minimum, and students are encouraged to deepen and broaden their grasp of their major through careful allocation of their elective semester credit hours.

All Sociology degrees require students to complete at least 6 semester credit hours of support work. These courses, which require advance approval from advisors, should serve to introduce students to other social sciences in addition to those entailed in the coursework within students’ major discipline.

INTERNSHIP STUDY

Majors in Sociology may apply 3 or 6 semester credit hours of internship study to their baccalaureate program. Internship entails supervised experience, usually within selected organizations in the San Antonio area. The internship coordinator of the Department of Sociology arranges placement. Students majoring in non-social science disciplines 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.

DEPARTMENT HONORS

The Department of Sociology, through its Department Honors program, provides the opportunity for advanced study under close faculty supervision to those students who have demonstrated outstanding scholarship.

Selection for honors designation is based on academic performance and recommendation by discipline faculty. To be eligible for the program, students must have a minimum grade point average of 3.0 overall at UTSA and a minimum grade point average of 3.5 in Sociology at UTSA. Minimum grade point averages must be maintained for students to receive the approval of the Department Honors Committee and the Sociology faculty. Students applying for Department Honors are expected to enroll in the appropriate honors thesis course during their final two semesters. The supervising faculty sponsor and another department faculty member must approve the completed thesis. Students interested in this program should contact their faculty advisors for additional information.

Bachelor of Arts Degree in Sociology

The minimum number of semester credit hours required for the Bachelor of Arts degree in Sociology, including the Core Curriculum requirements, is 120. Thirty-nine of the total semester credit hours required for the degree must be at the upper-division level.

All candidates for this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

**Core Curriculum requirements:** Students seeking the Bachelor of Arts degree in Sociology must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| Rhetoric (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
Degree Requirements

A. 33 semester credit hours in the major, 24 of which must be at the upper-division level:

1. 15 semester credit hours of required courses:

   6 semester credit hours:
   
   SOC  1013  Introduction to the Study of Society and
   
   SOC  3343  Classical Sociological Theory or
   
   SOC  3353  Contemporary Sociological Theory

   6 semester credit hours of methods courses:

   SOC  3313  Conceptualization and Measurement in Sociology and
   
   SOC  3373  Qualitative Research Methods or
   
   SOC  3323  Research Design and Application in Sociology or
   
   SOC  3333  Survey Research Methods
3 semester credit hours:

SOC  4973  Sociology Senior Seminar
or
SOC  4993  Honors Thesis

2. 18 additional semester credit hours of sociology electives as approved by the student’s advisor. Students are encouraged to take a broad variety of courses.

B. 6 semester credit hours of support work in the social sciences outside the major. Social Science may include: AMS, ANT, BBL, CRJ, ECO, GRG, HIS, POL, PSY, WGS.

C. 6 semester credit hours in a single language other than English

D. 33 semester credit hours of electives.
   Recommended areas include foreign languages, social sciences, and statistics. It is strongly recommended that theory and research methods requirements be completed by the first semester of the junior year.

Minor in Sociology

All students pursuing a Minor in Sociology must complete 21 semester credit hours, 12 of which must at the upper-division level.

A. 9 semester credit hours of required courses:

SOC  1013  Introduction to the Study of Society
SOC  3313  Conceptualization and Measurement in Sociology
SOC  3343  Classical Sociological Theory
or
SOC  3353  Contemporary Sociological Theory

B. 12 semester credit hours of sociology electives

To declare a Minor in Sociology, obtain advice, or seek approval of substitutions for course requirements, students should consult the College of Liberal and Fine Arts Undergraduate Advising Center.

COURSE DESCRIPTIONS
SOCIOLOGY
(SOC)

1001  Freshman Topics in Sociology
(1-1) 1 hour credit.
   Required for entering freshmen in the College of Liberal and Fine Arts with less than 15 hours of coursework and who are interested in majoring in Sociology.
   Critical study of topics in sociology. Innovative classroom and learning techniques are used to introduce students to these topics and to help strengthen critical thinking, problem solving, and writing skills. A maximum of 3 semester credit hours of freshman topics courses may apply to a bachelor’s degree, although this specific topic may be taken only once.

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. [TCCN: SOCI 1301.]
2013 **Social Problems**  
(3-0) 3 hours credit.  
An examination of major contemporary social problems and their causes and consequences. Topics may include poverty, racism, sexism, deviance and crime, drug and alcohol dependence, the urban crisis, overpopulation, and war. [TCCN: SOCI 1306.]

3003 **Sociological Foundations**  
(3-0) 3 hours credit. Prerequisite: SOC 1013.  
A seminar for new sociology majors to orient them to basic theoretical, methodological, epistemological, and ethical issues in sociology. Topics may include the role of theory in sociology, the process of theory building and testing, the utility of various modes of investigation and analysis, the critical examination of research literature, and the relevance of sociology to real-world problems.

3013 **Social Stratification**  
(3-0) 3 hours credit.  
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.  
Development of modern world cities, the ecology of cities, the organization of cities, major social problems, and the social psychology of urban life.

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.

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.

3053 **Deviance and Difference**  
(3-0) 3 hours credit.  
An analysis of forms of deviance and consideration of social/political trends toward difference. An examination of theories may include: biological, analytic, labeling, functionalist, culture conflict, radical, and post-structuralist.

3063 **Collective Behavior**  
(3-0) 3 hours credit. Prerequisite: SOC 1013.  
Case studies and associated theory dealing with various forms of collective behavior ranging from spontaneous events to organized mass movements.

3073 **Migration Dynamics**  
(3-0) 3 hours credit.  
Attention will be given to theoretical explanations; social, economic, physical, and ideological features of migration; legal and undocumented immigrants; and resultant issues of adjustment and incorporation.

3083 **Social Change**  
(3-0) 3 hours credit.  
Principal models and theories of social transformation applied to examples of societal change.

3093 **Religion and Society**  
(3-0) 3 hours credit.  
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.
A consideration of the social construction of the phenomenon of crime, a brief review of the major sociological approaches to the study of crime, and a consideration of personal, property, and victimless crimes, and their impact on society.

3133 Sociology of Pluralism in the Southwest
(3-0) 3 hours credit. Prerequisite: SOC 1013.
The principal minority groups in the American Southwest, with special emphasis on the experience of Mexican Americans. The course will deal with forms and consequences of intergroup relations, social movements, culture, and identity.

3163 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. Contemporary and continuing issues are covered in the context of theory and research. Topics may include family violence, gender roles in the family, divorce and remarriage, socialization of children, alternative family structures, and the aging family. (Formerly SOC 2053. Credit cannot be earned for SOC 3163 and SOC 2053.)

3173 Economy and Society
(3-0) 3 hours credit.
Explores the social dimensions of production, distribution, and consumption of goods and services. Examines the structure and function of economic organizations in society.

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, lifestyles, and worldview. Determinants of work satisfaction.

3203 Gerontology
(3-0) 3 hours credit.
An examination of historical and cross-cultural differences in the status of the elderly in society. Includes interaction of the elderly with social institutions, and policy implications of the demographic shift toward an aging population in the United States.

3213 Medical Sociology
(3-0) 3 hours credit.
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 the organization of health care delivery.

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.
3263  **Latinas in U.S. Society**  
(3-0) 3 hours credit.  
Focuses on women of Latino descent in the U.S. with an emphasis on the experiences of women in Texas in comparison to other groups from the Southwest. The material addresses: historical presence in the American Southwest; patriarchy and familism; labor and employment issues; immigrant women and border issues; political involvement and feminist vision; artistic, cultural and intellectual expression.

3273  **Sociology of Music**  
(3-0) 3 hours credit. Prerequisite: SOC 1013.  
Explores the social significance of music on people's everyday life. Includes the relationship between music and identity and its exemplification through several popular musics of the world. Topics may include the musical styles of conjunto and tejano in the U.S. Southwest, tango and rock in Argentina, and salsa in New York.

3283  **Poverty**  
(3-0) 3 hours credit.  
The causes and consequences of poverty in the United States and selected other societies. An examination of social programs designed to combat poverty.

3293  **Gender Roles**  
(3-0) 3 hours credit. Prerequisite: SOC 1013.  
The nature of gender roles in our own and other societies. Consideration of how people learn gender roles and the outcome of this learning for individuals, families, and societies. Alternatives to conventional gender roles.

3313  **Conceptualization and Measurement in Sociology**  
(3-0) 3 hours credit. Prerequisites: Completion of the Core Curriculum requirement in mathematics and SOC 1013.  
Introduction to conceptualization, operationalization, and measurement in the social sciences. Use of elementary measures of central tendency and dispersion, cross-tabulation, 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. Enrollment limited to sociology majors or minors or students in other degree programs requiring the course. (Formerly SSC 3013. Credit cannot be earned for both SOC 3313 and SSC 3013.)

3323  **Research Design and Application in Sociology**  
(3-0) 3 hours credit. Prerequisites: Completion of Core Curriculum requirement in mathematics and SOC 3313.  
Introduction to the philosophy of science and the logic of research design, including field, experimental, and survey projects. Methods of data gathering, analysis, and reporting applied to research on policy-relevant problems in the social sciences. Enrollment limited to sociology majors. (Formerly SSC 3023. Credit cannot be earned for both SOC 3323 and SSC 3023.)

3333  **Survey Research Methods**  
(3-0) 3 hours credit. Prerequisite: SOC 3313, the equivalent, or consent of instructor.  
A course in survey research, including research design, questionnaire construction, sampling, interviewing, control procedures, and data processing. (Formerly SOC 3123. Credit cannot be earned for both SOC 3333 and SOC 3123.)

3343  **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 3153. Credit cannot be earned for both SOC 3343 and SOC 3153.)

3353  **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 3183. Credit cannot be earned for SOC 3353 and SOC 3183.)
3373  **Qualitative Research Methods**  
(3-0) 3 hours credit. Prerequisite: SOC 1013.  
Introduces the assumptions, theories, and practices of qualitative research methods. The course is designed to provide opportunities for developing specific qualitative research skills while gaining familiarity with theories, issues, and problems in qualitative research.

3383  **Sociology of the African American Community**  
(3-0) 3 hours credit.  
This course provides students with a comprehensive understanding of the history, struggles, and diversity of the African-American community. Emphasis will be placed on contemporary public issues as well as on the historical role of the African American Community within urban society. A sociological framework is used to analyze political, educational, and economic systems in America and their impact on African Americans.

3403  **Mexican American Stratification**  
(3-0) 3 hours credit.  
An examination of the social status of Mexican Americans and their relationship to the dominant society. Issues may include the position of Mexican Americans in economic, political, and status hierarchies and the major factors limiting mobility within these systems.

3413  **Mexican American Family**  
(3-0) 3 hours credit. Prerequisite: SOC 1013.  
Focuses on contemporary issues regarding Mexican American families. Topics of discussion include family structure, child-rearing practices, gender roles, marital stability, and intermarriage. Comparison with other minorities and the majority group will allow discussion of variant family patterns.

3423  **Mass Media in Society**  
(3-0) 3 hours credit.  
The course will examine media production and its role in the economy; the construction of media meaning, signification, and ideology; and the role of the audience in making sense of messages. Larger issues of societal power will be treated, along with an examination of alternative media.

3433  **Mexican Immigration and U.S. Society**  
(3-0) 3 hours credit.  
Focuses on the growth and development of the Mexican population in the U.S. and controversies around Mexican immigration, both legal and undocumented. Uses a sociological perspective to present a historical analysis of Mexican migration to the U.S., theoretical explanations of migrations, and the social implications of these issues.

3463  **Sociology of Sport and Leisure**  
(3-0) 3 hours credit. Prerequisite: SOC 1013.  
Examines 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.

3503  **Sociology of Education**  
(3-0) 3 hours credit.  
An exploration of education as an institution that affects and is affected by the larger social structure. Topics may include the role of schools in society, connections between schooling, stratification and the economy, gender and ethnic differences in achievement, and social and cultural contexts of learning.

3513  **Children and Society**  
(3-0) 3 hours credit.  
An examination of the evolution of concepts of childhood over time. Topics may include theories of child development, cultural and social influences in child raising, the effects of affluence and poverty on children, children in post-modern societies, and child socialization in different cultures.
3523  **Language and Society**  
(3-0) 3 hours credit.  
A sociology of language course to explore aspects of language use and behaviors and how and why they vary. Topics include gender, cultural and socioeconomic variations in language use, language communities, ethnicity and language, intra- and inter-group communication, and language planning.

3533  **Border and Transnational Relations**  
(3-0) 3 hours credit.  
The development of political, economic and cultural relations among nations. Topics may include globalization, transnational identities and experiences, and social, economic, and cultural issues affecting the U.S. - Mexico border. (Formerly SSC 3533. Credit cannot be earned for SOC 3533 and SSC 3533 or HIS 3533)

4003  **Criminological Theory**  
(3-0) 3 hours credit.  
A consideration of criminological theory, beginning with a development of what constitutes theory and how it is formulated, tested, and evaluated. Reviews the paradigms, models and theories that attempt to explain criminal behavior and critiques each.

4023  **Violence and Society**  
(3-0) 3 hours credit.  
Examines the major theories that attempt to explain why violence occurs in society. Certain forms of violence are studied from a variety of perspectives in sociology to determine whether present explanations of violent behavior are adequate. (Formerly SSC 3203. Credit cannot be earned both for SOC 4023 and SSC 3203).

4033  **Historical and Comparative Sociology**  
(3-0) 3 hours credit.  
A broad-based consideration of the use of historical materials in sociological analysis, especially as this facilitates empirically- and theoretically-oriented studies across different societies and through time. Topics may include comparative approaches to major historical phenomena such as nationalism, bureaucratization, feudalism and capitalism.

4063  **Civil-Military Relations**  
(3-0) 3 hours credit.  
Explores the past, present, and future structure and use of the U.S. military. Topics examined may include the historical events and social trends affecting the relationship between the military organization and the civilian government and issues surrounding such controversies as a draft vs. a volunteer military, the increasing minority representation, and the use of women, particularly in combat.

4183  **Theories of Identity**  
(3-0) 3 hours credit. Prerequisite: SOC 1013.  
An examination of how different theories make sense of the ways people construct social and cultural identities. The course may cover theories of identity, symbolic interactionism, Marxism, psychoanalysis, structuralism, post-structuralism, feminism, and post-colonial theory.

4433  **Culture and Society**  
(3-0) 3 hours credit.  
Explores the social significance of cultural production, including the relationships between art, consciousness, the economy, and history. Themes examined may include the social production of art, art and ideology, the problem of artistic reception, and art movements and cultural resistance. Topics include art and culture in minority social movements, the relation between high and low culture, and cultural conflict over art.
4443 **Race/Ethnicity, Class, Gender, and Sexuality**  
(3-0) 3 hours credit. Prerequisites: SOC 3343 or SOC 3353, and SOC 3313.  
An interdisciplinary exploration of the historical and contemporary differences and similarities in the study of race and gender within the context of class. Engages students in empirically testing the most important ideas concerning these topics. This course is designed as a seminar integrating issues of race, class, and gender. Primarily for upper-division Sociology students.

4911,3 **Independent Study**  
1 or 3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the Department Chair, 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 semester credit 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: Completion of 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 coursework. A maximum of 6 semester credit hours may be earned through this internship.

4953 **Special Studies in Sociology**  
(3-0) 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 may be repeated for credit when topics vary, but not more than 6 semester credit 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 the last two semesters. Supervised research and preparation of an honors thesis. May be repeated once with advisor’s approval.
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COLLEGE OF PUBLIC POLICY

Mission Statement
The mission of the College of Public Policy is to serve as a bridge between the theory and knowledge of the global academic communities represented by the disciplines in the College and the practical needs of policymakers and practitioners in a diverse community of citizens and organizations. The College of Public Policy serves as a resource for the local and international community, and seeks to transform those areas of public policy in which it is involved, creating positive changes through the creation and transmission of knowledge. The College fulfills this mission by engaging in research in the areas of public policy, teaching at both the undergraduate and graduate level, and service activities appropriate to the units of the College.

Minor in Legal Studies
All students pursuing a Minor in Legal Studies must complete 21 semester credit hours, at least 15 of which must be at the upper-division level. Questions about the Minor in Legal Studies should be directed to the Advising Center in the College of Public Policy or the Institute for Law and Public Affairs.

A. 9 semester credit hours of required courses:

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ENG 2413</td>
<td>Technical Writing</td>
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<tr>
<td>LGS 3013</td>
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<td>CRJ 3613</td>
<td>Legal Research and Writing</td>
</tr>
<tr>
<td>LGS 4013</td>
<td>Issues in Law and Society</td>
</tr>
</tbody>
</table>

B. 12 additional semester credit hours (at least 9 of which must be at the upper-division level) from the following list, in at least three disciplines other than the student’s major:

<table>
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<tr>
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<tbody>
<tr>
<td>ANT 3733</td>
<td>Political and Legal Anthropology</td>
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<tr>
<td>BLW 3013</td>
<td>Business Law</td>
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<tr>
<td>BLW 4953</td>
<td>Special Studies in Business Law</td>
</tr>
<tr>
<td>BIO 4073</td>
<td>Law, Ethics, and the Life Sciences</td>
</tr>
<tr>
<td>COM 3113</td>
<td>Argumentation and Debate</td>
</tr>
<tr>
<td>CRJ 2813</td>
<td>Introduction to Courts and the Legal System</td>
</tr>
<tr>
<td>CRJ 3623</td>
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<tr>
<td>CRJ 3633</td>
<td>Trial and Evidence</td>
</tr>
<tr>
<td>CRJ 4633</td>
<td>Criminal Procedure</td>
</tr>
<tr>
<td>CRJ 4743</td>
<td>Crime in Fiction</td>
</tr>
<tr>
<td>CRJ 4833</td>
<td>Special Topics in Courts and Adjudication</td>
</tr>
<tr>
<td>HIS 3093</td>
<td>United States Constitutional History</td>
</tr>
<tr>
<td>HIS 3183</td>
<td>Law and American Development</td>
</tr>
<tr>
<td>LGS 2013</td>
<td>Introduction to Legal Studies</td>
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<tr>
<td>LGS 4123</td>
<td>Legal and Philosophical Reasoning</td>
</tr>
<tr>
<td>LGS 4913</td>
<td>Independent Study</td>
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<tr>
<td>LGS 4933</td>
<td>Internship in Legal Studies</td>
</tr>
<tr>
<td>PHI 2043</td>
<td>Introductory Logic</td>
</tr>
<tr>
<td>POL 3023</td>
<td>Civil Liberties in American Law and Practice</td>
</tr>
<tr>
<td>POL 2623</td>
<td>Law and Society</td>
</tr>
</tbody>
</table>
POL 3323 Constitutional Law
POL 4153 Seminar in Jurisprudence
POL 4323 Administrative Law
PSY 4303 Psychology and the Law

To declare a Minor in Legal Studies or to obtain advice, information, or approvals for course requirement substitutions, students should consult the Undergraduate Advising Center in the College of Public Policy.

COURSE DESCRIPTIONS
LEGAL STUDIES
(LGS)

2013 Introduction to Legal Studies
(3-0) 3 hours credit.
An introduction to legal studies from an interdisciplinary perspective, exploring historical and contemporary aspects of the content, operations, and effects of law in societies.

3013 Legal Research and Writing
(3-0) 3 hours credit.
Provides students with the opportunity to explore the modes and sources of legal research, both traditional and electronic. CRJ 3613 Legal Research and Writing may be substituted for LGS 3013 in the LGS minor. (Credit cannot be earned for both LGS 3013 and CRJ 3613.)

4013 Issues in Law and Society
(3-0) 3 hours credit.
Provides students with the opportunity to conduct research on selected issues associated with the law and society. May be repeated for credit when topics vary, with permission of the Director of the Institute for Law and Public Affairs.

4123 Legal and Philosophical Reasoning
(3-0) 3 hours credit
An intensive analysis of selected philosophical texts focusing on law and justice. Students are challenged to develop critical reading and thinking skills by studying the texts of philosophies such as Plato, Aristotle, Dworkin, Hart and/or others who outline difficult arguments and unfamiliar ideas. Emphasis is placed on drawing reasoned conclusions, advocating positions, and expressing oneself in oral and written forms. (Same as POL 4123. Credit cannot be earned for LGS 4123 and POL 4123.)

4913 Independent Study
3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the Director of the Institute for Law and Public Affairs, and Dean of the College of Public Policy.
Independent reading, research, discussion, and writing under direction of a faculty member. May be repeated for credit, but not more than 6 credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree. A maximum of 3 semester credit hours may be applied to the minor.

4933 Internship in Legal Studies
3 hours credit. Prerequisite: Consent of internship coordinator at the Institute of Law and Public Affairs, faculty supervisor, and Director of the Institute for Law and Public Affairs.
Supervised experience relevant to legal studies within selected community organizations. A maximum of 3 semester credit hours may be applied to the minor.
DEPARTMENT OF CRIMINAL JUSTICE

The Department of Criminal Justice offers a Bachelor of Arts degree in Criminal Justice, which provides the opportunity for a comprehensive study of criminal justice, with emphases in policing and crime prevention, corrections and juvenile justice, and courts and adjudication. 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.

Bachelor of Arts Degree in Criminal Justice

The minimum number of semester credit hours required for this degree, including the Core Curriculum requirements, is 120. Thirty-nine of the total semester credit hours required for the degree must be at the upper-division level. Criminal justice majors, through consultation with faculty advisors, should choose elective courses from Core Curriculum requirements that will enable them to become fundamentally aware of the complex social and cultural issues confronting contemporary American society.

All candidates for this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Arts degree in Criminal Justice must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

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| Rhetoric (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| Domain I: Mathematics and Science | Mathematics (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
Science (6 semester credit hours)  
Three hours from Level One and three hours from Level Two will satisfy this core requirement. |
| Domain II: Society and Culture | United States History and Diversity (6 semester credit hours)  
Any six hours listed under this section in the list of core courses will satisfy this core requirement.  
Political Studies (6 semester credit hours)  
POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.  
Social and Behavioral Sciences (3 semester credit hours)  
CRJ 1113 The American Criminal Justice System  
Economics (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
Degree Requirements

A. 30 semester credit hours of criminal justice coursework:

1. 18 semester credit hours:

   CRJ 1113 The American Criminal Justice System
   CRJ 2153 Nature of Crime and Justice
   CRJ 3013 Research Methods in Criminal Justice
   CRJ 3213 Managing Criminal Justice Organizations
   CRJ 3313 Critical Thinking Applications to Criminal Justice
   CRJ 3623 Substantive Criminal Law

2. 9 semester credit hours from one of the following areas of emphasis:

   Policing and Crime Prevention
   CRJ 2213 Introduction to Policing
   CRJ 3233 Introduction to Forensic Science
   CRJ 4123 Concepts of Investigation
   CRJ 4413 Contemporary Police Practices
   CRJ 4433 Police and National Security Intelligence
   CRJ 4443 Special Topics in Policing and Crime Prevention

   Corrections and Juvenile Justice
   CRJ 2513 Corrections: Theory and Practice
   CRJ 3533 Probation, Parole, and Intermediate Sanctions
   CRJ 3563 Juvenile Justice
   CRJ 4613 Supervising the Correctional Client
   CRJ 4663 Special Topics in Corrections and Juvenile Justice

   Courts and Adjudication
   CRJ 2813 Introduction to Courts and the Legal System
   CRJ 3613 Legal Research and Writing
   CRJ 3633 Trial and Evidence
   CRJ 4633 Criminal Procedure
   CRJ 4863 Special Topics in Courts and Adjudication

3. 3 semester credit hours of CRJ 4933 Internship in Criminal Justice taken in consultation with the student’s faculty advisor. Three semester credit hours of appropriate upper-division coursework may be taken in lieu of the internship if a student has relevant and documented full-time employment at least one year in duration in a criminal justice agency. May be repeated for an additional 3 semester credit hours with a different internship work site.
B. 15 semester credit hours of upper-division support work chosen in consultation with the student’s advisor

C. 33 semester credit hours of electives

COURSE DESCRIPTIONS
CRIMINAL JUSTICE
(CRJ)

1113 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. (Formerly CRJ 2113. Credit cannot be earned for both CRJ 1113 and CRJ 2113.) [TCCN: CRJ 1301.]

2153 Nature of Crime and Justice
(3-0) 3 hours credit.
A multidisciplinary survey of positivist and classical theories of crime causation with an overview of major crime control strategies. Incidence and patterns of violent, economic, and public-order crimes may be explored. (Formerly CRJ 3153. Credit cannot be earned for both CRJ 2153 and CRJ 3153.)

2213 Introduction to Policing
(3-0) 3 hours credit.
An introduction to American policing organizations (public and private), history of policing, modern community policing practices, and important trends in law enforcement. [TCCN: CRJ 2328.]

2513 Corrections: Theory and Practice
(3-0) 3 hours credit.
A study of the history, philosophy, and practice of corrections in America. Theories and practices of incarceration; legal and administrative issues surrounding imprisonment and the death penalty. (Formerly CRJ 3513. Credit cannot be earned for both CRJ 2513 and CRJ 3513.) [TCCN: CRJ 2313.]

2813 Introduction to Courts and the Legal System
(3-0) 3 hours credit.
Examines state and federal American court systems, their powers, remedies, limitations, and procedures, and the contributions of courts to governance. (Formerly CRJ 4813. Credit cannot be earned for both CRJ 2813 and CRJ 4813.) [TCCN: CRJ 1306.]

3013 Research Methods in Criminal Justice
(3-0) 3 hours credit. Prerequisite: MAT 1023.
Provides students with an opportunity to be knowledgeable consumers of criminal justice research. Provides an overview of principles of scientific inquiry, research designs, and statistical concepts and techniques. Introduction to interpretation of data analysis and preparation of research reports. (Formerly SSC 3013. Credit cannot be earned for both CRJ 3013 and SSC 3013.)

3213 Managing Criminal Justice Organizations
(3-0) 3 hours credit. Prerequisite: CRJ 1113 or the equivalent.
Examines bureaucratic, political, and other characteristics of justice organizations through a review of theories of public administration and organizational behavior. Applies theories to problems and policies encountered in managing criminal justice agencies.
3233  **Introduction to Forensic Science**  
(3-0) 3 hours credit. Prerequisite: CRJ 1113 or the equivalent.  
Provides students with a basic understanding of the nature of physical evidence and its part in our criminal justice system, an introduction to basic scientific and legal principles involved with the utilization of physical evidence, and exposure to specific items of physical evidence to include their components, manufacture, methods of analysis, and value in case work. (Formerly CRJ 3133. Credit cannot be earned for both CRJ 3233 and CRJ 3133.)

3313  **Critical Thinking Applications to Criminal Justice**  
(3-0) 3 hours credit. Prerequisite: CRJ 1113 or equivalent.  
Develops skills in information interpretation, analysis, and evaluation in the context of criminal justice applications. Enhances ability to make sound decisions in response to criminal justice problems and issues. Cultivates proficiency in formal and informal logic, as well as creative thinking.

3533  **Probation, Parole, and Intermediate Sanctions**  
(3-0) 3 hours credit.  
History, philosophy, and practice of community supervision of offenders. Examination of various intermediate punishments including boot camps, intensive probation supervision, electronic monitoring, restitution, and community service.

3563  **Juvenile Justice**  
(3-0) 3 hours credit.  
Examination of the history of adolescence and the development of the juvenile justice system. An in-depth study of police, courts and corrections as applied to youth. Examination of youth as both offenders and victims. Topics include child abuse, youth gangs, waiver/transfer of youth to the adult court, and the death penalty for juveniles. (Formerly CRJ 3543. Credit cannot be earned for both CRJ 3563 and CRJ 3543.)

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. (Credit cannot be earned for both LGS 3013 and CRJ 3613.)

3623  **Substantive Criminal Law**  
(3-0) 3 hours credit. Prerequisite: CRJ 1113 or the equivalent.  
Jurisprudential philosophy and case study of common law and statutory crimes. Includes functions and development of substantive criminal law, elements of specific offenses, and 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, and exclusionary rules.

3713  **Ethics in Criminal Justice Practice**  
(3-0) 3 hours credit. Prerequisites: CRJ 2153 and CRJ 3213 or equivalents  
Survey of major schools of ethics theory; sources of ethical and philosophical foundations for criminal justice functions; common quandaries confronting officers, supervisors, and executives in justice organizations. Examines the role of criminal justice within modern civil societies.

4113  **Intimate and Family Violence**  
(3-0) 3 hours credit. Prerequisite: CRJ 2153 or equivalent.  
Historical, social and legal responses and policies of domestic violence, intimate partner violence, and child abuse. Characteristics of victims and perpetrators of violence and the progression and cycle of violence are examined. In-depth study of the process of violent victimization and victimizing.
4123  Concepts of Investigation
(3-0) 3 hours credit. Prerequisite: CRJ 1113.
Examination of theories and practices of the investigation process in the criminal justice system; specific operational techniques; and application of innovative techniques.

4303  Victims and the Justice System
(3-0) 3 hours credit.
Examination of theories of victimization, personal consequences of victimization, and processes of healing. Study of institutions associated with victims and victim services. Overview of criminal justice system responses to victims, and civil justice remedies.

4313  Minorities and Women in the Criminal Justice System
(3-0) 3 hours credit.
Study of the special problems faced by cultural minorities and women in the criminal justice system.

4413  Contemporary Police Practices
(3-0) 3 hours credit.
An examination of the emergence of broad-based crime prevention and problem-solving methods, with an emphasis on “values driven” management practices and the evolution of a new partnership between the police and the community.

4433  Police and National Security Intelligence
(3-0) 3 hours credit. Prerequisite: CRJ 1113 or equivalent; and sophomore, junior, or senior standing.
Provides a framework for understanding the mission, role, and structure of police and national security intelligence organizations. Examines a wide range of issues concerning the intelligence function in domestic and international contexts, such as drug trafficking, transnational organized crime, espionage, and use of information systems in fraud. Includes discussion of ethical and legal dimensions of intelligence in democracies and other governmental forms.

4443  Special Topics in Policing and Crime Prevention
(3-0) 3 hours credit.
Considers special topics in policing and crime prevention not ordinarily evaluated in depth in other courses, such as comparative policing systems, personnel issues, police civil and criminal liabilities, job satisfaction and stress, diversity issues, ethics, police use of force, and future of policing. May be repeated for credit when topics vary.

4453  Drugs, Drug Laws, and Crime
(3-0) 3 hours credit.
Study of major categories of controlled/abused substances, the effects of consumption, the historical emergence of substance control policies and the “drug war.” Examination of the externalities and trends in drug-control policies, drug-related crimes, and future social control strategies in the United States.

4613  Supervising the Correctional Client
(3-0) 3 hours credit.
Examines the components of effective supervision of correctional clients, including risk and needs assessment. Provides skills for successful face-to-face encounters with correctional clients. 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 the equivalent.
A procedurally-oriented discussion of criminal law, including law of arrest, search and seizure, preliminary examination, bail, the grand jury, indictment and information, arraignment, trial, and review.
**4643 Organized Crime**  
(3-0) 3 hours credit.  
Study of the development of organized crime; social and legal definitions; theories and research on factors sustaining organized and conspiratorial crimes; containment strategies. Federal, state and global responses to organized crime; links with white collar crime. (Formerly CRJ 4713. Credit cannot be earned for both CRJ 4643 and CRJ 4713.)

**4653 White Collar Crime**  
(3-0) 3 hours credit.  
Study of the theory, nature, scope, and impact of occupational, political, and organizational/corporate crime. Comparison of white collar crime to street crime. Examination of the structural foundations for these types of crimes and current and future systems for control of white collar crimes. (Formerly CRJ 4713. Credit cannot be earned for both CRJ 4653 and CRJ 4713.)

**4663 Special Topics in Corrections and Juvenile Justice**  
(3-0) 3 hours credit.  
Considers special topics in corrections and juvenile justice not ordinarily evaluated in depth in other courses, such as the death penalty, special correctional populations, and correctional administration. May be repeated for credit when topics vary.

**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.

**4743 Crime in Fiction**  
(3-0) 3 hours credit.  
An examination of fictional characterizations of crime and justice, fictional applications of social science methodologies, and concerns for social conditions and crime through such authors as Chekov, Dickens, Dostoyevsky, Norris, Puzo, Twain, Wright, Wambaugh, and others.

**4833 Violent Crime**  
(3-0) 3 hours credit.  
Examination of crimes of personal violence, focusing on homicide, robbery, assault, and rape. Discussion of major theories of violent personal behavior and examination of historical and current data on violent crime. Consideration of rates of violent crime, how these rates have changed, and factors that contribute to violent crimes.

**4853 Sex Crimes and the Law**  
(3-0) 3 hours credit  
Examination of the nature and etiology of the major categories of sexual offending and overview of contemporary justice system responses.

**4863 Special Topics in Courts and Adjudication**  
(3-0) 3 hours credit. Prerequisites: CRJ 2813 and CRJ 3623 or equivalents.  
Considers special topics in courts and adjudication not ordinarily evaluated in depth in other courses, such as judicial administration, specialized courts, judicial intervention, and emerging areas of criminal law. 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, the Department Chair, 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 semester credit hours of independent study, regardless of discipline, will apply to a bachelor’s degree.
4933 Internship in Criminal Justice
3 hours credit. Prerequisites: CRJ 2153; CRJ 3213 and CRJ 3623; at least one course in area of emphasis; consent of academic advisor and internship coordinator.
Supervised experience in an administrative setting that 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 semester credit hours will apply to a bachelor’s degree.

4953 Special Studies in Criminal Justice
(3-0) 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 regular course offerings. Special Studies may be repeated for credit when topics vary, but no more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4993 Honors Thesis
3 hours credit. Prerequisites: Enrollment limited to candidates for Honors in Criminal Justice during the last two semesters; completion of honors examination and consent of the Honors College.
Supervised research and preparation of an honors thesis. May be repeated once with advisor’s approval.
DEPARTMENT OF PUBLIC ADMINISTRATION

The Department of Public Administration offers only graduate programs at this time.
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COLLEGE OF SCIENCES

COLLEGE HONORS

The College of Sciences designates certain of its outstanding students as Honors students and provides the opportunity for advanced study under close faculty supervision.

Selection for honors designation is based on the student’s academic performance and recommendation by the faculty of the student’s major discipline. To be eligible for the program, students must have a minimum overall grade point average of 3.0 at UTSA and a minimum grade point average of 3.0 in their major at UTSA. These minimum averages must be maintained for students to receive the approval of the College Honors Committee and the discipline faculty. Students applying for College Honors are expected to enroll in the appropriate honors research course during their final two semesters. 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.

DEPARTMENT OF BIOLOGY

The Department of Biology offers a Bachelor of Science degree in Biology with emphases in molecular cell biology and neurobiology. The degree is structured around a comprehensive core curriculum and related offerings in chemistry, physics, and mathematics that 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.

DEPARTMENT HONORS

The Department of Biology designates certain of its outstanding students as Department Honors students and provides the opportunity for advanced study under close faculty supervision.

Selection of students for admission to the departmental honors program is based on the student’s academic performance and recommendation by the faculty. To be eligible for the program, students must have a minimum overall grade point average of 3.0 and a minimum grade point average of 3.5 in their major. The minimum grade point averages must be maintained for students to receive the approval of the Department Honors Committee and faculty. Students admitted to the honors program are expected to enroll in Honors Thesis (BIO 4993) during their final two semesters. The completed thesis must be approved by the supervising faculty sponsor and another departmental faculty member. Students interested in this program should contact their faculty advisors for additional information. Department Honors can be attained independent of or in addition to University Honors.

Bachelor of Science Degree in Biology

The minimum number of semester credit hours required for the Bachelor of Science degree in Biology, including the Core Curriculum requirements, is 126. Thirty-nine of the total semester credit hours required for the degree must be at the upper-division level. All major and support work courses must be completed with a grade of “C” or better. Students seeking teacher certification should contact the Teacher Advising and Certification Center in the College of Education and Human Development for information. Undergraduates seeking elementary teacher certification must complete the interdisciplinary studies degree.

All candidates for this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.
Core Curriculum requirements: Students seeking the Bachelor of Science degree in Biology must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

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<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
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<td><strong>Rhetoric (6 semester credit hours)</strong></td>
<td>All students must take the following six hours to meet this core requirement:</td>
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<td>ENG 1013 Freshman Composition</td>
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<td>ENG 1023 Discourse across the Disciplines</td>
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<td><strong>Domain I: Mathematics and Science</strong></td>
<td><strong>Mathematics (3 semester credit hours)</strong></td>
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<tr>
<td></td>
<td>Any 3 hours from the following list will satisfy this core requirement:</td>
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<tr>
<td></td>
<td>MAT 1214 Calculus I</td>
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<td></td>
<td>STA 1993 Statistical Methods for the Life and Social Sciences</td>
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<td></td>
<td><strong>Science (6 semester credit hours)</strong></td>
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<tr>
<td></td>
<td>Any 6 semester credit hours from the following list will satisfy this core requirement:</td>
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<tr>
<td></td>
<td>BIO 1113 Biology I</td>
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<tr>
<td></td>
<td>BIO 1123 Biology II</td>
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<td></td>
<td>BIO 1143 Biology III</td>
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<td></td>
<td>CHE 1103 General Chemistry I</td>
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<td></td>
<td>CHE 1303 General Chemistry II</td>
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<tr>
<td></td>
<td>PHY 1603, 1611 General Physics I and Laboratory</td>
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<td></td>
<td>PHY 1623, 1631 General Physics II and Laboratory</td>
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<tr>
<td><strong>Domain II: Society and Culture</strong></td>
<td><strong>United States History and Diversity (6 semester credit hours)</strong></td>
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<tr>
<td></td>
<td>Any six hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<tr>
<td></td>
<td><strong>Political Studies (6 semester credit hours)</strong></td>
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<tr>
<td></td>
<td>POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<tr>
<td></td>
<td><strong>Social and Behavioral Sciences (3 semester credit hours)</strong></td>
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<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<tr>
<td></td>
<td><strong>Economics (3 semester credit hours)</strong></td>
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<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<tr>
<td><strong>Domain III: Literature and the Arts</strong></td>
<td><strong>Literature (3 semester credit hours)</strong></td>
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<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<td></td>
<td><strong>The Arts (3 semester credit hours)</strong></td>
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<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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<tr>
<td><strong>Domain IV: Interdisciplinary Studies</strong></td>
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<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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</table>
Degree Requirements

A. 51 semester credit hours in the major, 32 of which must be at the upper-division level:

1. 26 semester credit hours in biology are required:
   
   BIO 1113 Biology I
   BIO 1122 Laboratory Investigations in Biology
   BIO 1123 Biology II
   BIO 1143 Biology III
   BIO 2313, 2322 Genetics and Laboratory
   BIO 3513, 3522 Biochemistry and Laboratory
   BIO 3813, 3822 Cellular Biology and Laboratory

2. 10 semester credit hours of upper-division biology electives; two of the following must be completed:
   
   BIO 3283, 3292 Principles of Ecology and Laboratory
   BIO 3413, 3422 General Physiology and Laboratory
   BIO 3433, 3442 Neurobiology and Laboratory
   BIO 3713, 3722 Microbiology and Laboratory
   BIO 4143, 4152 Developmental Biology and Laboratory

3. 15 additional semester credit hours of biology electives, 12 of which must be at the upper-division level

B. 24 to 25 semester credit hours of support work:

1. 13 semester credit hours are required in chemistry:
   
   CHE 1103 General Chemistry I
   CHE 1303 General Chemistry II
   CHE 1312 General Chemistry II Laboratory
   CHE 2203, 2242 Organic Chemistry I and Laboratory

2. A minimum of 3 semester credit hours of mathematics selected from the following:
   
   MAT 1214 Calculus I
   STA 1993 Statistical Methods for the Life and Social Sciences

3. 8 semester credit hours of physics:
   
   PHY 1603, 1611 General Physics I and Laboratory
   PHY 1623, 1631 General Physics II and Laboratory

C. 18 semester credit hours of free electives, some of which need to be upper-division to meet University requirements of 39 hours of upper-division coursework.

COURSE DESCRIPTIONS

BIOLOGY
(BIO)

1033 Drugs and Society
(3-0) 3 hours credit.
An examination of licit and illicit drugs and their biosocial effects. Topics include pharmacology of alcohol, stimulants, hallucinogens, addiction, and abuse. May apply toward the Level I Core Curriculum requirement in interdisciplinary studies. [TCCN: PHED 1346.]
1113 **Biology I**  
(3-0) 3 hours credit.  
An introduction to the science of biology, emphasizing basic cellular principles. Topics include biochemistry, cell biology, metabolism, molecular biology, and genetics. May apply toward the Level I Core Curriculum requirement in science. (Formerly BIO 1203. Credit cannot be earned for both BIO 1113 and BIO 1203.) [TCCN: BIOL 1306.]

1122 **Laboratory Investigations in Biology**  
(0-6) 2 hours credit.  
Introduction to the tools, techniques, and topics of modern experimental biology. (Formerly BIO 1212. Credit cannot be earned for both BIO 1122 and BIO 1212.) [TCCN: BIOL 1106.]

1123 **Biology II**  
(3-0) 3 hours credit. Prerequisite: BIO 1113  
An introduction to the science of biology, emphasizing the structure and function of plants and animals. Topics include plant physiology, animal physiology, sexual reproduction, and development. May apply toward the Level II Core Curriculum requirement in science.

1143 **Biology III**  
(3-0) 3 hours credit. Prerequisite: BIO 1113  
An introduction to the science of biology, emphasizing a comparative study of the diversity of life forms and their interactions with the environment. Topics include the decomposers, the producers, the consumers, ecology, and evolution. May apply toward the Level II Core Curriculum requirement in science. (Formerly BIO 1223. Credit cannot be earned for both BIO 1143 and BIO 1223.)

2003 **Human Sex and Reproduction**  
(3-0) 3 hours credit.  
An in-depth look at human reproductive anatomy, physiology, and behavior. Topics to be considered include anatomy, sex differentiation, neuroendocrine physiology, conception and development, birth control, and sexually transmitted diseases. (Formerly BIO 1023. Credit cannot be earned for both BIO 2003 and BIO 1023.)

2123 **Comparative Anatomy of Vertebrates**  
(3-0) 3 hours credit. Prerequisites: BIO 1113 and BIO 1122. BIO 1143 is recommended. Concurrent enrollment in BIO 2132 is recommended.  
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. Prerequisite: Concurrent enrollment in BIO 2123 is recommended

2313 **Genetics**  
(3-0) 3 hours credit. Prerequisites: BIO 1113, BIO 1122, and CHE 1103 or the equivalent. Concurrent enrollment in BIO 2322 is recommended.  
Principles governing transmission of hereditary factors in plants and animals, with emphasis on molecular biochemical and population genetics. [TCCN: BIOL 2316.]

2322 **Genetics Laboratory**  
(0-6) 2 hours credit. Optional for nonmajors. Concurrent enrollment in BIO 2313 is recommended.

3003 **Introduction to Marine Biology**  
(3-0) 3 hours credit. Prerequisites: BIO 1113, BIO 1122, and BIO 1143.  
An introduction to the physio-chemical factors that affect the biology of marine organisms.

3013 **Introductory Pathology**  
(3-0) 3 hours credit. Prerequisites: BIO 1113, BIO 1122, and BIO 1123 or AHS 2103.  
Concepts of disease and diagnosis of pathological conditions.
3033 Human Physiology and Performance
(3-0) 3 hours credit. Prerequisite: 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 1113, BIO 1122, and BIO 1143.
A comprehensive study of the invertebrates with emphasis on their diversity, morphology, ecology, and evolution.

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. Prerequisites: BIO 1113 and BIO 1122.
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.

3163 Histology and Cytology
(3-0) 3 hours credit. Prerequisites: BIO 1113, BIO 1122, and BIO 1123. Concurrent enrollment in BIO 3172 is recommended.
The cytological and histological aspects of cellular organization.

3172 Histology and Cytology Laboratory
(0-6) 2 hours credit. Concurrent enrollment in BIO 3163 is recommended.
Microscopic study of tissues and organs. Basic techniques to prepare tissues will be studied.

3213 Animal Behavior
(3-0) 3 hours credit. Prerequisite: BIO 1113, BIO 1122, BIO 1143, or consent of instructor.
A detailed study of animal behaviors and their biological determinants.

3263 The Woody Plants
(2-3) 3 hours credit. Prerequisite: Consent of instructor.
A study of the woody plants emphasizing the characteristics of family, genus, species. Includes identification of the common woody plants. Leaf, stem, and flower morphology, anatomy, and collecting techniques. Lecture, laboratory, and fieldwork will be included as part of the course.

3273 Biology of Flowering Plants
(2-3) 3 hours credit.
A study of the wildflowers of Texas emphasizing identification of the more common wildflowers, as well as family characteristics, flower anatomy, and plant morphology. Plant-collecting techniques and wildflower photography will be included. Lecture, laboratory, and fieldwork are also part of the course.

3283 Principles of Ecology
(3-0) 3 hours credit. Prerequisites: BIO 1113, BIO 1122, and BIO 1143 or consent of instructor; completion of the Core Curriculum requirement in mathematics. Concurrent enrollment in BIO 3292 is recommended for biology majors.
A study of the interaction of organisms with their environment, with focus on ecological principles, adaptations of organisms, environmental pollution, and principles of conservation.
3292 **Principles of Ecology Laboratory**  
(0-6) 2 hours credit. Concurrent enrollment in BIO 3283 is recommended.  
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 1113, BIO 1122, BIO 1123 and BIO 1143.  
A comprehensive study of the plant kingdom, including the structure, physiology and function of plants and their importance in our lives as sources of food, fiber and pharmaceuticals.

3351 **Plant Sciences Laboratory**  
(0-3) 1 hour credit. Concurrent enrollment in BIO 3343 is recommended.

3413 **General Physiology**  
(3-0) 3 hours credit. Prerequisites: BIO 1113, BIO 1122, and BIO 1123, and CHE 1303. BIO 1143 is recommended.  
Concurrent enrollment in BIO 3422 is recommended.  
Fundamental properties and processes in living systems. (Credit cannot be earned for both AHS 2103 and BIO 3413.)

3422 **General Physiology Laboratory**  
(0-6) 2 hours credit. Concurrent enrollment in BIO 3413 is recommended.  
(Credit cannot be earned for both AHS 2111 and BIO 3422.)

3433 **Neurobiology**  
(3-0) 3 hours credit. Prerequisites: BIO 3413 and BIO 3422. Concurrent enrollment in BIO 3442 is recommended.  
Anatomy and physiology of nervous systems; the mechanisms of neuronal functions.

3442 **Neurobiology Laboratory**  
(0-6) 2 hours credit. Concurrent enrollment in BIO 3433 is recommended.  
A laboratory course emphasizing principles presented in BIO 3433.

3513 **Biochemistry**  
(3-0) 3 hours credit. Prerequisites: CHE 2203 and CHE 2242; BIO 2313 is also recommended.  
Introduction to biochemistry: amino acids, protein structure, enzymes, lipids, metabolism, nucleic acid structure, bioenergetics, and carbohydrates. Concurrent enrollment in BIO 3522 is recommended.

3522 **Biochemistry Laboratory**  
(0-6) 2 hours credit. Concurrent enrollment in BIO 3513 is recommended.  
Basic biochemical laboratory techniques: titration, protein purification, enzyme kinetics, chromatography, electrophoresis, and centrifugation.

3613 **The Biology of Aging**  
(3-0) 3 hours credit. Prerequisite: BIO 1113. BIO 1123 is recommended.  
The biological principles of human life and health; the changes that occur with aging and their implications for the lives of students and their families.

3623 **Neuropsychopharmacology**  
(3-0) 3 hours credit. Prerequisite: BIO 1113. BIO 1123 is recommended.  
A study of the pharmacology of drugs that affect the function of the central nervous system. Topics include drug-receptor interactions, drugs of abuse, and drugs used to treat mental illness.
3633 **Human Environmental Physiology**  
(3-0) 3 hours credit. Prerequisite: BIO 3413 or AHS 2103.  
Adaptive physiological responses to unusual environmental conditions.

3663 **Human Embryology**  
(3-0) 3 hours credit. Prerequisites: BIO 1113, BIO 1122, and BIO 1123, or consent of the instructor.  
Course will cover the development of the human embryo from fertilization to the birth of the fetus. The origin of various tissues and organs will be followed during development. The environmental and genetic factors that can alter development will be discussed.

3713 **Microbiology**  
(3-0) 3 hours credit. Prerequisite: BIO 2313. Concurrent enrollment in BIO 3722 is recommended.  
A comprehensive study of microorganisms, including their composition, morphology, growth, metabolism, classification, ecology, and significance in disease. (Credit cannot be earned for both AHS 1053 and BIO 3713.)

3722 **Microbiology Laboratory**  
(0-6) 2 hours credit. Concurrent enrollment in BIO 3713 is recommended.  
(Credit cannot be earned for both AHS 1061 and BIO 3722.)

3733 **Industrial Microbiology**  
(3-0) 3 hours credit. Prerequisites: BIO 3713 and BIO 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 BIO 3513. Concurrent enrollment in BIO 3822 is recommended.  
A study of cellular function with relation to structure from the microscopic to the molecular level.

3822 **Cellular Biology Laboratory**  
(0-6) 2 hours credit. Concurrent enrollment in BIO 3813 is recommended.

3913 **Molecular Biology**  
(3-0) 3 hours credit. Prerequisite: BIO 3513.  
A study of nucleotides, DNA, replication, recombination, RNA, transcription, genetic code, translation, and chromosomes.

4023 **Environmental Toxicology**  
(3-0) 3 hours credit. Prerequisite: BIO 3413.  
Environmental toxicants will be studied in terms of carcinogenicity, teratogenicity, actions on physiological processes, and impact on environmental systems.

4033 **Conservation Biology**  
(3-0) 3 hours credit. Prerequisite: BIO 3283.  
The class topics will include studying the nature of the biosphere, threats to its integrity, and ecologically sound responses to these threats. Also included will be the origin and preservation of biotic diversity, how the rich variety of plant and animal life around us arose, how it has been maintained by natural processes, and how we can prevent its destruction.

4043 **Desert Biology**  
(2-3) 3 hours credit. Prerequisites: BIO 3283 and BIO 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, as well as examinations of desert climatic patterns, geology, and natural history. Lecture, laboratory, and fieldwork will be included.
4053  **Wildlife Biology**  
(3-0) 3 hours credit. Prerequisite: BIO 3283. 
An introduction to wildlife biology and management including ecological principles dealing with ecosystems, natural communities, and populations. The importance of animal behavior, the availability of food, cover, wildlife diseases, predators, hunting, and trapping will be included. Topics important to water, soils, farmlands, rangelands, and forest management will be addressed as well as the conservation of nongame and endangered wildlife.

4063  **Ornithology**  
(2-3) 3 hours credit. 
A course covering various aspects of the biology of birds, including anatomy, physiology, systematics, evolution, behavior, ecology, and biogeography. Field trips will be included.

4073  **Law, Ethics, and the Life Sciences**  
(3-0) 3 hours credit. Prerequisite: Junior or senior status, 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.

4083  **Entomology**  
(3-0) 3 hours credit. Prerequisites: BIO 3413 and BIO 3513, or consent of instructor. 
Insect taxonomy and systematics, evolution, anatomy, physiology, reproduction, development and ecology.

4133  **The Biotechnology of Malting and Brewing**  
(3-0) 3 hours credit. Prerequisites: BIO 3513, BIO 3522, BIO 3713, and BIO 3722. 
A study of the scientific principles underlying brewing and other fermentation technology.

4143  **Developmental Biology**  
(3-0) 3 hours credit. Prerequisites: BIO 1113, BIO 1123, BIO 1143, BIO 3513, and BIO 3813. Concurrent enrollment in BIO 4152 is recommended. 
Sequential analysis of development in vertebrates and the factors which affect fertilization, organogenesis, and implantation. (Formerly BIO 3143. Credit cannot be earned for both BIO 3143 and BIO 4143.)

4152  **Developmental Biology Laboratory**  
(0-6) 1 hour credit. Concurrent enrollment in BIO 4143 is recommended. 
(Formerly BIO 3152. Credit cannot be earned for both BIO 3152 and BIO 4152.)

4203  **Plant Ecology**  
(3-0) 3 hours credit. Prerequisite: BIO 3283, BIO 3292, or consent of instructor. Concurrent enrollment in BIO 4221 is recommended. 
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. Concurrent enrollment in BIO 4203 is recommended. 
Provides the opportunity for field-oriented study to examine qualitative and quantitative methods and evaluate plant communities.

4233  **Field Biology**  
(3-0) 3 hours credit. Prerequisites: BIO 1113, BIO 1122, and BIO 1143 or consent of instructor. Concurrent enrollment in BIO 4241 is recommended. 
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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4241</td>
<td>Field Biology Laboratory</td>
<td>(0-3)</td>
<td>1 hour credit. Concurrent enrollment in BIO 4233 is recommended.</td>
<td>A field-oriented course offering the opportunity for practical experience observing, collecting, and identifying Texas plants and animals.</td>
</tr>
<tr>
<td>4333</td>
<td>Population Genetics</td>
<td>(3-0)</td>
<td>3 hours credit. Prerequisites: BIO 2313 and BIO 2322.</td>
<td>A quantitative approach to the study of genetics systems in populations, including mutations, selection, polymorphism, and mating systems.</td>
</tr>
<tr>
<td>4343</td>
<td>Molecular Genetics</td>
<td>(3-0)</td>
<td>3 hours credit. Prerequisites: BIO 2313 and BIO 2322. Concurrent enrollment in BIO 4352 is recommended.</td>
<td>Application of recombinant DNA techniques to the study of animals and plants in industry, medicine, and research.</td>
</tr>
<tr>
<td>4352</td>
<td>Molecular Genetics Laboratory</td>
<td>(0-6)</td>
<td>2 hours credit. Prerequisites: BIO 2313 and BIO 2322. Concurrent enrollment in BIO 4343 is recommended.</td>
<td>A laboratory course emphasizing techniques for cloning, sequencing, and analyzing recombinant DNA molecules.</td>
</tr>
<tr>
<td>4353</td>
<td>Comparative Animal Physiology</td>
<td>(3-0)</td>
<td>3 hours credit. Prerequisites: BIO 3413 and BIO 3422.</td>
<td>A phylogenetic study of physiologic adaptation in animals.</td>
</tr>
<tr>
<td>4453</td>
<td>Endocrinology</td>
<td>(3-0)</td>
<td>3 hours credit. Prerequisites: BIO 3413, BIO 3422, BIO 3513, and BIO 3522. Concurrent enrollment in BIO 4462 is recommended.</td>
<td>A consideration of the physiological effects of hormones on the organism in health and disease, with a study of the gross and microscopic morphology of the glands of internal secretion.</td>
</tr>
<tr>
<td>4462</td>
<td>Endocrinology Laboratory</td>
<td>(0-6)</td>
<td>2 hours credit. Concurrent enrollment in BIO 4453 is recommended.</td>
<td>A laboratory course emphasizing principles presented in BIO 4453.</td>
</tr>
<tr>
<td>4523</td>
<td>Intermediary Metabolism</td>
<td>(3-0)</td>
<td>3 hours credit. Prerequisites: BIO 3513 and BIO 3522.</td>
<td>A detailed consideration of metabolic pathways and energy metabolism and their regulation.</td>
</tr>
<tr>
<td>4592</td>
<td>Advanced Neurobiology Laboratory</td>
<td>(0-6)</td>
<td>2 hours credit. Concurrent enrollment in BIO 4593 is required.</td>
<td>Instruction and hands-on training in techniques of in-vitro electrophysiology, neural modeling, cell culture, and molecular neurobiology.</td>
</tr>
<tr>
<td>4593</td>
<td>Advanced Neurobiology</td>
<td>(3-0)</td>
<td>3 hours credit. Prerequisites: BIO 4433 and BIO 4442. Concurrent enrollment in BIO 4592 is required.</td>
<td>A lecture-seminar course with an emphasis on current topics in neurophysiological, neurocomputational, cellular and molecular biological research.</td>
</tr>
<tr>
<td>4603</td>
<td>Plant Physiology</td>
<td>(3-0)</td>
<td>3 hours credit. Prerequisites: BIO 3343 and BIO 3351, and CHE 2203 and CHE 2242. Concurrent enrollment in BIO 4611 is recommended.</td>
<td>Principles of organization of cellular activity and molecular structure of protoplasm; includes nutrition, translocation, mineral metabolism, respiration, and photosynthesis.</td>
</tr>
<tr>
<td>4611</td>
<td>Plant Physiology Laboratory</td>
<td>(0-3)</td>
<td>1 hour credit. Concurrent enrollment in BIO 4603 is recommended.</td>
<td>Qualitative and quantitative experiments in the study of plant physiology.</td>
</tr>
</tbody>
</table>
4643 Medicinal Plants
(3-0) 3 hours credit. Prerequisites: BIO 1113, BIO 1123, BIO 1143, and CHE 2203.
Ethnobotanical, biochemical and pharmacological aspects of some of our most important plant-derived drugs.

4723 Virology
(3-0) 3 hours credit. Prerequisite: BIO 3713. Concurrent enrollment in BIO 4732 is recommended.
A study of the diversity of viruses and biochemical mechanisms for their replication.

4732 Virology Laboratory
(0-6) 2 hours credit. Concurrent enrollment in BIO 4723 is recommended.
A laboratory course emphasizing the principles of virus replication, genetics, and structure. Introduction to modern laboratory techniques for virus propagation, detection, quantitation, and for genetic-phenotypic analysis. (Formerly BIO 4731. Credit cannot be earned for both BIO 4731 and 4732.)

4743 Immunology
(3-0) 3 hours credit. Prerequisites: BIO 3513 and BIO 3522, or BIO 3713 and BIO 3722. Concurrent enrollment in BIO 4752 is recommended.
A study of the properties of antigens and antibodies and current concepts of humoral and cell-mediated immunity and the cells involved.

4752 Immunology Laboratory
(0-6) 2 hours credit. Concurrent enrollment in BIO 4743 is recommended.

4763 Parasitology
(3-0) 3 hours credit. Prerequisites: BIO 3713 and BIO 3722. Concurrent enrollment in BIO 4772 is recommended.
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. Concurrent enrollment in BIO 4763 is recommended.

4813 Brain and Behavior
(3-0) 3 hours credit. Prerequisite: BIO 1113, BIO 1123, and BIO 1122, or consent of instructor.
Basic physiological functions of the brain and how they relate to behavior.

4911-3 Independent Study
1 to 3 hours credit. (Hours arranged.) Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, and the Department Chair 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 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4951-3 Special Studies in Biology
(1,2,3-0) 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 may be repeated for credit when the topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4963 Seminar in Biology
(3-0) 3 hours credit. Prerequisite: Minimum of 20 semester credit hours in biological sciences.
An undergraduate seminar surveying selected biological topics through presentation and discussion of relevant contemporary research and literature. May not be repeated for credit. Limited to biology majors in their junior or senior year.
4972 MBRS-MARC Symposium
(2-0) 2 hours credit. Prerequisites: BIO 1113 or concurrent enrollment; 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. Course may be repeated for credit, but not more than 6 semester
credit hours may be applied to a bachelor’s degree.

4993 Honors Research
3 hours credit. Prerequisite: Enrollment limited to candidates for honors in biology during their last two semesters
and approval by the Department Honors Committee and faculty.
Supervised research and preparation of an honors thesis. May be repeated once with approval.

JOINT ALLIED HEALTH SCIENCE PROGRAMS

Joint degree programs with The University of Texas Health Science Center at San Antonio (UTHSCSA) leading to the
Bachelor of Science degree in Clinical Laboratory Sciences are available. A degree in this allied health program is awarded
jointly. Completion of joint program prerequisites does not guarantee or imply preferential admittance to the professional
phase of the program.

The preclinical curriculum for clinical laboratory sciences (CLS) includes Core Curriculum requirements, basic science
lecture and laboratory courses, and CLS courses. Clinical laboratory science concepts are introduced throughout the
curriculum, ending in a senior-year clinical practicum at UTHSCSA. Upon completion of all requirements, the student is
eligible to take one of the clinical laboratory sciences national certification examinations.

Preprofessional Curriculum

Also available are preprofessional courses offering students the opportunity to prepare for admission to nursing, medical,
dental, and other professional schools.

UTSA offers courses that fulfill the nursing preprofessional curriculum requirements for The University of Texas Health
Science Center at San Antonio. All coursework listed will transfer to UTHSCSA without any loss of credit. Specific
premedical and predental programs are not offered at UTSA. Admission requirements for these professional schools are
outlined in a separate section of this catalog. Additional information can be obtained from the Department of Biology and
through the chairman of the Health Related Professions Advisory Subcommittee of UTSA.

Professional Liability (Malpractice) Insurance Requirement

Allied health students are required by policies of the Board of Regents of The University of Texas System to show evidence of
professional liability (malpractice) insurance coverage prior to official registration for courses that involve a clinical
situation. Additional information on the requirement for obtaining such coverage is available from the director of the
Department of Biology

UTSA/UTHSCSA Joint Bachelor of Science Degree in Clinical Laboratory Sciences (CLS)

Certain specific physical skills and abilities are required to successfully participate in the clinical laboratory sciences 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, clinical laboratory sciences 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. Students complete
clinical laboratory sciences courses during their sophomore and junior years and enroll in classes on both the UTSA and
UTHSCSA campuses. To enroll in UTHSCSA courses, students must complete a course card obtainable from both the
UTHSCSA Office of Admissions and the Department of Clinical Laboratory Sciences. All CLSC courses are taught at
UTHSCSA and are listed separately.
For consideration for admission into the joint degree program, students must complete a separate application form. This form 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 1 for fall admission and November 1 for spring admission. Students must be admitted to UTHSCSA before they enroll in CLSC courses. Minimum requirements for admission to UTHSCSA include 24 semester credit hours of college work, an overall grade point average of 2.0, and no grade lower than a “C” in any basic science course.

Admission to and successful continuation in the program will provide the student with a clinical practicum position at one of the UTHSCSA teaching affiliates. A list of these affiliates may be obtained from the Department of Clinical Laboratory Sciences at UTHSCSA.

The clinical laboratory sciences 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, students are eligible to take one of the national certification examinations. All students are encouraged to be counseled each semester by either the CLS department chair or a member of the CLS faculty to ensure enrollment in appropriate coursework.

The minimum number of semester credit hours required for this degree, including the 42 hours of Core Curriculum requirements, is 157.5.

All candidates for this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

**Core Curriculum requirements:** Students seeking the UTSA/UTHSCSA Joint Bachelor of Science degree in Clinical Laboratory Sciences must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | **Mathematics** (3 semester credit hours)  
MAT 1093 Precalculus  
**Science** (6 semester credit hours): Any two of these courses may be used to satisfy this core requirement.  
BIO 1113 Biology I  
CHE 1103 General Chemistry I  
CHE 1303 General Chemistry II  
PHY 1603, 1611 General Physics I and Laboratory  
PHY 1623, 1631 General Physics II and Laboratory |
Degree Requirements

A.  55 semester credit hours in preprofessional support work:

1.  25 semester credit hours in the biological sciences:

   AHS 1883  Introduction to Clinical Laboratory Sciences
   BIO 1113  Biology I
   BIO 1122  Laboratory Investigations in Biology
   BIO 2313  Genetics

   AHS 2103  Human Biology: Physiology
   or
   BIO 3413  General Physiology
   or
   AHS 3463  Human Physiology
   BIO 3513  Biochemistry
   BIO 3713, 3722  Microbiology and Laboratory
   BIO 4743  Immunology

2.  13 semester credit hours in chemistry:

   CHE 1103  General Chemistry I
   CHE 1303  General Chemistry II
   CHE 1312  General Chemistry II Laboratory
   CHE 2203, 2242  Organic Chemistry I and Laboratory
3. 8 semester credit hours in physics:

- PHY 1603, 1611 General Physics I and Laboratory
- PHY 1623, 1631 General Physics II and Laboratory

4. 6 semester credit hours in mathematics:

- MAT 1093 Precalculus
- STA 1053 Basic Statistics

5. 3 semester credit hours in computer science

B. 60.5 semester credit hours in clinical laboratory sciences, all of which must be completed at UTHSCSA:

1. These courses are taken prior to clinical training and are integrated with support work taken at UTSA:

- CLSC 2051, 2052 Hematology/Laboratory 5 hours
- CLSC 2004, 2003 Parasitology & Mycology/Laboratory 3 hours
- CLSC 3001 Phlebotomy Practicum 0.5 hours
- CLSC 3010 Body Fluids 2 hours
- CLSC 3033, 3034 Medical Microbiology/Laboratory 5 hours
- CLSC 3060, 3064 Immunohematology/Laboratory 2.5 hours
- CLSC 3070, 3071 Diagnostic Immunology/Laboratory 2.5 hours
- CLSC 3081, 3082 Clinical Chemistry/Laboratory 4 hours

These courses are the senior lecture and clinical experience courses:

- CLSC 4033 Advanced Medical Microbiology 3 hours
- CLSC 4035 Introductory Molecular Diagnostics 1 hour
- CLSC 4037 Microbiology Practicum 5 hours
- CLSC 4053 Advanced Hematology 2 hours
- CLSC 4055 Advanced Immunohematology 2 hours
- CLSC 4057 Hematology Practicum 5 hours
- CLSC 4067 Immunohematology Practicum 5 hours
- CLSC 4083 Advanced Clinical Chemistry 3 hours
- CLSC 4087 Chemistry Practicum 5 hours
- CLSC 4092 Management I 1 hour
- CLSC 4093 Management II 2 hours
- ICLSC 4020 Issues in Healthcare 1 hour
- INTD 4006 Professional Issues 1 hour

**Postbaccalaureate Clinical Laboratory Sciences Certificate Option**

The postbaccalaureate certificate option in Clinical Laboratory Sciences is designed for students who hold a bachelor’s degree in science from an accredited institution. The curriculum includes 59 semester credit hours of professional coursework. Prerequisite science requirements not completed as a part of the bachelor’s degree may be taken as a part of the certificate curriculum. The certificate option course of study is 18 months long.

In addition, the program offers a categorical certificate designed for individuals with a bachelor’s degree in science who are interested in a particular subdiscipline of the clinical laboratory. These certificates are available in Microbiology, Clinical Chemistry, Immunohematology, and Hematology. Students can complete the categorized requirements in 12 to 18 months, based on part-time enrollment. Successful completion of the certificate curriculum qualifies students to take the national certification examinations as generalists or categorical scientists.

Interested persons should contact the Department of Clinical Laboratory Sciences at UTHSCSA for further details.
UTHSCSA Bachelor of Science Degree in Nursing

The UTHSCSA nursing degree program is fully accredited by the National League for Nursing. The program is composed of two phases. In Phase I students complete a minimum of 60 semester credit hours (two years) of prenursing course requirements available at UTSA. Phase I coursework at UTSA is approved by the Department of Biology Health Related Professions Advisory Subcommittee. Phase II requires students to complete 60 semester credit hours of courses in the nursing major through either the Generic Process or Flexible Process track at the UTHSCSA School of Nursing. The minimum number of semester credit hours required for this degree is 120.

Admission into Phase I must be made through UTSA. Admission into Phase II must be made through UTHSCSA. Students who have completed 40 to 45 semester credit hours of Phase I courses may request an application for admission from the Office of Nursing Admissions at UTHSCSA. Questions about Phase I prenursing course requirements and requests for admission applications should be addressed to:

Nursing Admissions
Office of Student Services
The University of Texas Health Science Center at San Antonio
7703 Floyd Curl Drive
San Antonio, Texas 78284-7702
(210) 567-2670

Application for admission to Phase II must be made by April 1 for Fall Semester admission and October 1 for Spring Semester admission. Applicants must have an overall grade point average of 2.0 and a grade point average of 2.3 in prenursing course requirements in order to be considered for admission. Students with higher grade point averages will be more competitive.

Applicants must have passed all sections of the Texas Academic Skills Program (TASP) test and must meet minimum standards before they may enroll in upper-division (Phase II) coursework. Students may not enroll in the upper-division nursing courses until they have completed the 60 semester credit hours of prerequisite courses and have been formally accepted by UTHSCSA.

Students admitted to the School of Nursing must be certified in cardiopulmonary resuscitation (CPR) before registration.

Phase I: 59 semester credit hours at UTSA. All courses are subject to approval by the School of Nursing when the student applies for Phase II.

A. 20 semester credit hours of natural and physical sciences:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHS 2083, 2091</td>
<td>Human Biology: Anatomy and Laboratory</td>
<td></td>
</tr>
<tr>
<td>AHS 2103, 2111</td>
<td>Human Biology: Physiology and Laboratory</td>
<td></td>
</tr>
<tr>
<td>AHS 1053, 1061</td>
<td>Introductory Microbiology (Laboratory strongly recommended)</td>
<td></td>
</tr>
<tr>
<td>CHE 1003, 1011</td>
<td>General Chemistry for Allied Health Sciences (Laboratory strongly recommended)</td>
<td></td>
</tr>
<tr>
<td>CHE 1203, 1211</td>
<td>Elementary Organic and Biochemistry (Laboratory strongly recommended)</td>
<td></td>
</tr>
</tbody>
</table>

*BIO 1113 Biology I and BIO 1122 Laboratory Investigations in Biology are prerequisites to the above allied health services courses.

B. 15 semester credit hours in the behavioral sciences:

1. PSY 1013 Introduction to Psychology
   PSY 2503 Developmental Psychology
   SOC 1013 Introduction to the Study of Society

2. 6 semester credit hours of electives
C. 24 semester credit hours in other basic requirements:
   
   1. 6 semester credit hours required:

      AHS 2043 Nutrition
      STA 1053 Basic Statistics (or 1063 or 1073)

   2. 18 semester credit hours of UTSA Core Curriculum requirements (for a listing of the courses that fulfill these requirements, see pages 9-13 of this catalog):

      Rhetoric
      American history
      Political studies

Phase II: One of the following plans, completed at UTHSCSA:

A. Generic Plan

   The following lists the courses in the Generic Process Program Plan. This plan may be taken on a full-time or part-time basis but must be completed within four years of initial enrollment in Phase II of the nursing program.

   FIRST SEMESTER, JUNIOR YEAR

   NURS 3209 Introduction to Professional Nursing 2 hours
   NURS 3310 Nursing and Drug Therapy 3 hours
   NURS 3811 Nursing of Individuals with Deviations in Health Status 8 hours

   SECOND SEMESTER, JUNIOR YEAR

   NURS 3522 Nursing the Client with Mental Illness 5 hours
   NURS 3912 Nursing of Families: Childbirth, Parenting, Illness 9 hours

   THIRD SEMESTER, SENIOR YEAR

   NURS 4203 The Nurse as a Professional 2 hours
   NURS 4513 Community Health Nursing 5 hours
   NURS 4523 Nursing of Clients with Chronic Health Problems 5 hours

   FOURTH SEMESTER, SENIOR YEAR

   NURS 4504 The Nurse as Manager and Leader 5 hours
   NURS 4704 Nursing the Client with Major Health Problems 7 hours
   Upper-Division Electives 3 semester credit hours of electives must be in nursing 9 hours

B. Flexible Plan

   Only students with previous nursing experience are eligible for this plan. Although this program can be completed on a part-time basis, all work toward the degree must be completed within four years of the date of initial enrollment in Phase II of the nursing program. Some courses are offered by examination only. Credit for much of the program can be completed by examination also. For a complete list of these courses, contact the UTHSCSA School of Nursing.
FIRST SEMESTER (courses offered by examination only)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 3327</td>
<td>Nursing of Clients with Alteration in Mental Health</td>
<td>3</td>
</tr>
<tr>
<td>NURS 3624</td>
<td>Nursing Practice: Clinical Skills</td>
<td>6</td>
</tr>
<tr>
<td>NURS 3925</td>
<td>Nursing of Adults with Health Problems</td>
<td>9</td>
</tr>
<tr>
<td>NURS 3926</td>
<td>Nursing of Children and Childbearing Women</td>
<td>9</td>
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</tbody>
</table>

SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>NURS 4212</td>
<td>Professional Nursing: Health Assessment</td>
<td>2</td>
</tr>
<tr>
<td>NURS 4504</td>
<td>The Nurse as a Manager and Leader</td>
<td>5</td>
</tr>
<tr>
<td>NURS 4512</td>
<td>Professional Nursing: Health Promotion</td>
<td>5</td>
</tr>
</tbody>
</table>

THIRD SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>NURS 4114</td>
<td>Professional Nursing: Research</td>
<td>1</td>
</tr>
<tr>
<td>NURS 4213</td>
<td>Professional Nursing: Issues and Ethics</td>
<td>2</td>
</tr>
<tr>
<td>NURS 4413</td>
<td>Professional Nursing: Family Focus</td>
<td>4</td>
</tr>
<tr>
<td>NURS 4513</td>
<td>Community Health Nursing</td>
<td>5</td>
</tr>
</tbody>
</table>

Upper-Division Electives 3 semester credit hours of electives must be in nursing 9 hours

COURSE DESCRIPTIONS

ALLIED HEALTH SCIENCES (AHS)

**1053 Introductory Microbiology**  
(3-0) 3 hours credit. Prerequisites: BIO 1113 and BIO 1122, or consent of instructor.  
A general study of microorganisms, their characteristics, isolation, growth, and importance in nature, industry, public health, and human disease. (Credit cannot be earned for both AHS 1053 and BIO 3713.) [TCCN: BIOL 2320.]

**1061 Introductory Microbiology Laboratory**  
(0-3) 1 hour credit.  
Credit cannot be earned for both AHS 1061 and BIO 3722. [TCCN: BIOL 2120.]

**1883 Introduction to Clinical Laboratory Sciences**  
(3-0) 3 hours credit. Prerequisite: CHE 1103 is recommended.  
Overview of the profession of clinical laboratory sciences, 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 1113 and BIO 1122, or AHS 2103.  
An examination of human nutritional needs from infancy to adulthood. [TCCN: BIOL 1322.]

**2083 Human Biology: Anatomy**  
(3-0) 3 hours credit. Prerequisites: BIO 1113, and BIO 1122.  
Systemic anatomy of the human organism. Includes cell biology, histology, and gross anatomy of major organ systems. May not be applied to a B.S. in Biology. [TCCN: BIOL 2301.]

**2091 Human Biology: Anatomy Laboratory**  
(0-3) 1 hour credit.  
May not be applied to a B.S. in Biology. [TCCN: BIOL 2101.]
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>2103</td>
<td>Human Biology: Physiology</td>
<td>(3-0)</td>
<td>Prerequisites: BIO 1113 and BIO 1122. Physiological processes in human systems. May not be applied to a B.S. in Biology. [TCCN: BIOL 2302.]</td>
</tr>
<tr>
<td>2111</td>
<td>Human Biology: Physiology Laboratory</td>
<td>(0-3)</td>
<td>1 hour credit. May not be applied to a B.S. in Biology. [TCCN: BIOL 2102.]</td>
</tr>
<tr>
<td>3463</td>
<td>Human Physiology</td>
<td>(3-0)</td>
<td>Prerequisites: BIO 1113 and BIO 1122, CHE 1203 or CHE 2203, or consent of instructor. Physiological processes in human systems.</td>
</tr>
</tbody>
</table>
DEPARTMENT OF CHEMISTRY

Bachelor of Science Degree in Chemistry

The Bachelor of Science degree in Chemistry provides opportunities for preparation for careers in industry, governmental agencies, environmental studies, preprofessional programs, and medical technology, and for graduate study in chemistry or other related fields. The degree plan, as described below, for the Bachelor of Science degree in Chemistry meets the minimum requirements for professional chemists as defined by the American Chemical Society and recipients receive a certificate from the American Chemical Society.

The minimum number of semester credit hours required for this degree, including the Core Curriculum requirements, is 126. All major and support work courses must be completed with a grade of “C” or better.

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Science degree in Chemistry must fulfill University Core Curriculum requirements in the same manner of other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | **Mathematics** (3 semester credit hours)  
MAT 1214 Calculus I  
**Science** (6 semester credit hours)  
Any 6 semester credit hours from the following list will satisfy this core requirement:  
CHE 1103 General Chemistry I  
CHE 1303 General Chemistry II  
PHY 1904, 1911 Technical Physics I and Laboratory  
PHY 1924, 1931 Technical Physics II and Laboratory |
| **Domain II: Society and Culture** | **United States History and Diversity** (6 semester credit hours)  
Any six hours listed under this section in the list of core courses will satisfy this core requirement.  
**Political Studies** (6 semester credit hours)  
POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.  
**Social and Behavioral Sciences** (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
**Economics** (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
Degree Requirements

A. 52 semester credit hours of required courses in chemistry:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>CHE 1103</td>
<td>General Chemistry I</td>
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<tr>
<td>CHE 1303</td>
<td>General Chemistry II</td>
</tr>
<tr>
<td>CHE 1312</td>
<td>General Chemistry II Laboratory</td>
</tr>
<tr>
<td>CHE 2203</td>
<td>Organic Chemistry I</td>
</tr>
<tr>
<td>CHE 2242</td>
<td>Organic Chemistry I Laboratory</td>
</tr>
<tr>
<td>CHE 2251</td>
<td>Organic Chemistry I Workshop</td>
</tr>
<tr>
<td>CHE 2303</td>
<td>Organic Chemistry II</td>
</tr>
<tr>
<td>CHE 2342</td>
<td>Organic Chemistry II Laboratory</td>
</tr>
<tr>
<td>CHE 3103</td>
<td>Analytical Chemistry</td>
</tr>
<tr>
<td>CHE 3204</td>
<td>Physical Chemistry I</td>
</tr>
<tr>
<td>CHE 3212</td>
<td>Physical Chemistry Laboratory</td>
</tr>
<tr>
<td>CHE 3224</td>
<td>Physical Chemistry II</td>
</tr>
<tr>
<td>CHE 3264</td>
<td>Descriptive Inorganic Chemistry</td>
</tr>
<tr>
<td>CHE 4103</td>
<td>Instrumental Analysis</td>
</tr>
<tr>
<td>CHE 4243</td>
<td>Organic Chemistry III</td>
</tr>
<tr>
<td>CHE 4253</td>
<td>Physical Chemistry III</td>
</tr>
<tr>
<td>CHE 4263</td>
<td>Inorganic Chemistry</td>
</tr>
<tr>
<td>CHE 4923</td>
<td>Special Project in Chemistry</td>
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<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>CHE 4913</td>
<td>Independent Study</td>
</tr>
<tr>
<td>CHE 4971</td>
<td>Proseminar</td>
</tr>
</tbody>
</table>

B. 9 additional semester credit hours of approved upper-division chemistry electives, 3 hours of which must be an organized course in chemistry, at the senior level or above; no more than 3 semester credit hours may be from CHE 4913 Independent Study or CHE 4923 Special Project in Chemistry.

C. 20 semester credit hours of support work in science and mathematics:

1. 17 semester credit hours of required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>MAT 1214</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MAT 1223</td>
<td>Calculus II</td>
</tr>
<tr>
<td>PHY 1904, 1911</td>
<td>Technical Physics I and Laboratory</td>
</tr>
<tr>
<td>PHY 1924, 1931</td>
<td>Technical Physics II and Laboratory</td>
</tr>
</tbody>
</table>

2. 3 additional semester credit hours of elective work from the College of Sciences, as approved by the advisor.
D. 3 semester credit hours in computer science:

   CS 1033 Microcomputer Applications

E. 9 semester credit hours of electives

**Bachelor of Arts Degree in Chemistry**

The Bachelor of Arts degree in Chemistry is a less comprehensive degree than the Bachelor of Science degree in Chemistry. It provides opportunities for preparation for careers in industry, governmental agencies, environmental studies, and preprofessional programs. It is not recommended for students planning to pursue graduate studies in chemistry or related fields. It does not meet the criteria for an American Chemical Society approved degree in chemistry.

The minimum number of semester credit hours required for this degree, including the Core Curriculum requirements, is 124. All major and support work courses must be completed with a grade of “C” or better.

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

**Core Curriculum requirements:** Students seeking the Bachelor of Arts degree in Chemistry must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
   ENG 1013 Freshman Composition  
   ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | **Mathematics** (3 semester credit hours)  
   MAT 1214 Calculus I  
   **Science** (6 semester credit hours)  
   Any 6 semester credit hours from the following list will satisfy this core requirement:  
   CHE 1103 General Chemistry I  
   CHE 1303 General Chemistry II  
   PHY 1603, 1611 General Physics I and Laboratory  
   PHY 1623, 1631 General Physics II and Laboratory  
   PHY 1904, 1911 Technical Physics I and Laboratory  
   PHY 1924, 1931 Technical Physics II and Laboratory |
Degree Requirements

A. 40 semester credit hours of required courses in chemistry:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 1103</td>
<td>General Chemistry I</td>
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<td>Organic Chemistry I Workshop</td>
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<td>CHE 2303</td>
<td>Organic Chemistry II</td>
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<td>Analytical Chemistry</td>
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<td>Physical Chemistry II</td>
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<tr>
<td>CHE 3264</td>
<td>Descriptive Inorganic Chemistry</td>
</tr>
<tr>
<td>CHE 4103</td>
<td>Instrumental Analysis</td>
</tr>
<tr>
<td>CHE 4971</td>
<td>Proseminar</td>
</tr>
</tbody>
</table>

B. 12 additional semester credit hours of approved upper-division chemistry electives; no more than 3 semester credit hours may be from CHE 4913 Independent Study or CHE 4923 Special Project in Chemistry

C. 27 to 29 semester credit hours of support work in science and mathematics:

1. 18 to 20 semester credit hours of required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 1214</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MAT 1223</td>
<td>Calculus II</td>
</tr>
</tbody>
</table>

Domain II: Society and Culture

United States History and Diversity (6 semester credit hours)

Any six hours listed under this section in the list of core courses will satisfy this core requirement.

Political Studies (6 semester credit hours)

POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.

Social and Behavioral Sciences (3 semester credit hours)

Any three hours listed under this section in the list of core courses will satisfy this core requirement.

Economics (3 semester credit hours)

Any three hours listed under this section in the list of core courses will satisfy this core requirement.

Domain III: Literature and the Arts

Literature (3 semester credit hours)

Any three hours listed under this section in the list of core courses will satisfy this core requirement.

The Arts (3 semester credit hours)

Any three hours listed under this section in the list of core courses will satisfy this core requirement.

Domain IV: Interdisciplinary Studies

(3 semester credit hours)

Any three hours listed under this section in the list of core courses will satisfy this core requirement.
Either
PHY 1603, 1611 General Physics I and Laboratory
PHY 1623, 1631 General Physics II and Laboratory
or
PHY 1904, 1911 Technical Physics I and Laboratory
PHY 1924, 1931 Technical Physics II and Laboratory

CS 1033 Microcomputer Applications

2. 9 additional semester credit hours of approved upper-division electives from the College of Sciences; up to 6 semester credit hours may be outside the college (9 hours for students seeking teacher certification) with approval of the advisor.

D. 12 semester credit hours of electives

**Minor in Chemistry**

The purpose of this program is to permit students majoring in other areas to obtain a solid, broad-based knowledge of chemistry. The program is applicable to those students in other areas of science and in preprofessional programs. All coursework for the Minor in Chemistry must be completed with a grade of “C” or better.

22 semester credit hours are required for this minor:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CHE 1303</td>
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<td>Analytical Chemistry</td>
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<tr>
<td>CHE 3264</td>
<td>Descriptive Inorganic Chemistry</td>
</tr>
</tbody>
</table>

To declare a Minor in Chemistry, obtain advice, or seek approval of substitutions for course requirements, students should consult the undergraduate advisor in the College of Sciences Undergraduate Advising Center.

**COURSE DESCRIPTIONS**

**CHEMISTRY**

(CHE)

1003  **Chemistry for Allied Health Sciences**
(3-0) 3 hours credit.
Introduction to atomic structure, chemical bonding, stoichiometry, states of matter, inorganic chemical reactions, and acids and bases. For majors in occupational therapy, prenursing, and dental hygiene. May not be applied to a major in chemistry, biology, or clinical laboratory sciences. Concurrent enrollment in CHE 1011 is recommended. [TCCN: CHEM 1305.]

1011  **Chemistry Laboratory for Allied Health Sciences**
(1-4) 1 hour credit. Prerequisite: Completion of or concurrent enrollment in CHE 1003.
Introduction to chemical laboratory techniques. For majors in occupational therapy, prenursing, and dental hygiene. May not be applied to a major in chemistry, biology, or clinical laboratory sciences. [TCCN: CHEM 1105.]
1053 Chemistry of Ordinary Things  
(3-0) 3 hours credit.  
An introduction to the fundamental concepts of chemistry and the study of the chemistry of life and the everyday world. For nonscience majors. May not be applied to a major in the natural sciences, engineering, or allied health sciences.

1073 Basic Chemistry  
(3-0) 3 hours credit.  
A one-semester preparatory course covering some basic concepts of inorganic chemistry, atomic-molecular structure, and related mathematics. May apply toward the Level I Core Curriculum requirement in science. May not be applied to a B.S. or B.A. in Chemistry.

1103 General Chemistry I  
(3-0) 3 hours credit. Prerequisites: Passing grade on Chemistry Placement Examination or grade of “C” or better in CHE 1073, and completion of, or concurrent enrollment in, MAT 1023. 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. Concurrent enrollment in CHE 1122 is recommended. May apply toward the Level II Core Curriculum requirement in science. [TCCN: CHEM 1311.]

1122 General Chemistry I Laboratory  
(1-5) 2 hours credit. Prerequisite: Completion of or concurrent enrollment in 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 CHE 1011. 
A survey of the structures and reactions of some important functional groups of organic chemistry, and the relationship of these functional groups to the chemistry of lipids, carbohydrates, nucleic acids, and proteins. May not be applied to a major in chemistry. Concurrent enrollment in CHE 1211 is recommended. [TCCN: CHEM 1307.]

1211 Organic and Biochemistry Laboratory  
(1-4) 1 hour credit. Prerequisite: Completion of or concurrent enrollment in CHE 1203. 
Laboratory examination of the properties of some simple organic and biological chemicals; topics include solubility, crystallization, organic reactions, titration, enzyme action, sugars, and vitamins. May not be applied to a major in chemistry. [TCCN: CHEM 1107.]

1303 General Chemistry II  
(3-0) 3 hours credit. Prerequisite: At least a “C” in CHE 1103 or the equivalent. A continuation of CHE 1103. Elementary inorganic and physical chemistry; topics include solutions, electrolytes, oxidation-reduction reactions, reaction trends, coordination chemistry, basic thermodynamics, chemical kinetics, and electrochemistry. Primarily for science majors. May apply toward Level II Core Curriculum requirement in science. [TCCN: CHEM 1312.]

1312 General Chemistry II Laboratory  
(1-5) 2 hours credit. Prerequisite: Completion of or concurrent enrollment in CHE 1303. Techniques of qualitative and quantitative chemical analysis, illustrated primarily via inorganic chemical systems and their reactions. Laboratory to accompany CHE 1303. [TCCN: CHEM 1112.]
2203 Organic Chemistry I  
(3-0) 3 hours credit. Prerequisites: CHE 1303 and 1312.  
An elementary study of structure, stereochemistry, reactions, and reaction mechanisms associated with organic  
compounds. Primarily for chemistry, premed, and science majors. Concurrent enrollment in CHE 2251 is highly  
recommended and required for chemistry majors. [TCCN: CHEM 2323.]

2242 Organic Chemistry I Laboratory  
(1-5) 2 hours credit. Prerequisite: Completion of or concurrent enrollment in CHE 2203.  
The first of two semesters of organic chemistry laboratory. 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. [TCCN: CHEM 2223.]

2251 Organic Chemistry I Workshop  
(0-2) 1 hour credit. Prerequisite: Concurrent enrollment in CHE 2203.  
A workshop section for discussion of problems amplifying and clarifying textual content of CHE 2203.

2303 Organic Chemistry II  
(3-0) 3 hours credit. Prerequisites: CHE 2203 and completion of or concurrent enrollment in CHE 2242. Concurrent  
enrollment in CHE 2351 is highly recommended.  
Continuing study of fundamentals of structure, reactions, and reaction mechanisms of phosphorus and sulphur;  
polyfunctional organic compounds. A continuation of CHE 2203. Concurrent enrollment in CHE 2351 is highly  
recommended. [TCCN: CHEM 2325.]

2342 Organic Chemistry II Laboratory  
(1-5) 2 hours credit. Prerequisites: CHE 2242 and completion of or concurrent enrollment in CHE 2303.  
Quantitative and continuing qualitative study of organic reactions and molecular structure through functional group  
interactions and spectroscopic techniques. Simple and multistep syntheses of organic compounds. A continuation of  
CHE 2242. [TCCN: CHEM 2225.]

2351 Organic Chemistry II Workshop  
(0-2) 1 hour credit. Prerequisite: Concurrent enrollment in CHE 2303.  
A workshop section for discussion of problems amplifying and clarifying textual content of CHE 2303.

3103 Analytical Chemistry  
(2-5) 3 hours credit. Prerequisites: CHE 1303, CHE 1312, and CS 1033.  
Topics in quantitative analysis including wet chemical and basic instrumental analysis; gravimetric, volumetric,  
electrochemical and spectrophotometric determinations combined with error analysis; fundamentals of chemical  
separations; applications of stoichiometry and chemical equilibria to design efficient analytical protocols.

3204 Physical Chemistry I  
(4-0) 4 hours credit. Prerequisites: CHE 1303, CHE 1312, MAT 1223, CS 1033, and PHY 1924 and PHY 1931;  
completion of two semesters of organic chemistry is strongly recommended.  
States of matter, gas laws, equations of state, and intermolecular interactions; thermodynamics and physical  
equilibria; elements of molecular-kinetic theory and statistical mechanics; properties of solutions, chemical  
equilibria, phase equilibria, and changes of state; and the underlying mathematical concepts necessary for the  
interpretation of these concepts and the application of computer software tools to these topics.

3212 Physical Chemistry Laboratory  
(1-5) 2 hours credit. Prerequisite: CHE 3103 and CHE 3224.  
Experimental study of thermodynamics, reaction kinetics, properties of solutions, changes of state and the underlying  
physical laws, with the statistical treatment of experimental errors and error propagation, and basic electronics.
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 photochemistry. A continuation of CHE 3204.

3264 **Descriptive Inorganic Chemistry**  
(3-3) 4 hours credit. Prerequisites: CHE 1303, CHE 1312, and CHE 2203.  
The basic principles of inorganic chemistry applied to the properties, reactions, and periodicity of inorganic elements and compounds. Includes the synthesis and characterization of inorganic compounds and the use of specialized laboratory techniques.

4103 **Instrumental Analysis**  
(2-5) 3 hours credit. Prerequisites: CHE 2342, CHE 3103, CHE 3212, and CHE 3224.  
The physical and chemical principles of modern instrumental techniques used for chemical analysis. Topics include emission, absorption, magnetic resonance, and FTIR spectroscopies, mass spectrometry, and chromatography. The use of spectrometric and chromatographic instrumentation in the separation, identification and quantitation of compounds in chemical systems. (Formerly CHE 3243. Credit cannot be earned for both CHE 4103 and CHE 3243.)

4203 **Introduction to Polymer Chemistry**  
(3-0) 3 hours credit. Prerequisite: CHE 2303, CHE 3224, or consent of instructor.  
Fundamental concepts of polymer chemistry, including mechanisms for synthesis, kinetics, and copolymerization; molecular weight, stereoisomerism, morphology, solubility, and thermal transitions; visco- and rubber elasticity; and the molecular basis for physical properties.

4243 **Organic Chemistry III**  
(3-0) 3 hours credit. Prerequisites: CHE 2303, CHE 2342, and CHE 2351; CHE 3204; or consent of instructor.  
Advanced mechanistic and/or synthetic aspects of organic reactions; additional topics such as molecular rearrangements and organic molecular orbital theory and its application to pericyclic reactions.

4253 **Physical Chemistry III**  
(3-0) 3 hours credit. Prerequisites: CHE 2303 and CHE 3224 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. Prerequisites: CHE 3204 and CHE 3264.  
A study of the structure, bonding, and properties of inorganic compounds; acid-base theory, crystalline state, coordination chemistry, and other advanced topics.

4363 **NMR Spectroscopy**  
(3-0) 3 hours credit. Prerequisite: PHY 1924, completion of or concurrent enrollment in CHE 3224, or consent of instructor.  
A lecture course with demonstrations dealing with the basic theory and applications of one- and two-dimensional nuclear magnetic resonance spectroscopy, including the interpretation of spectra. The parameters and pulse sequences for various types of NMR experiments and explanations of how molecular structural information can be obtained will be presented.

4373 **Organic Spectral Studies**  
(2-4) 3 hours credit. Prerequisite: CHE 2342. Corequisite CHE 3204 or consent of instructor.  
Identification of functional groups and the determination of the structure of compounds by spectral techniques including IR, NMR, mass spectroscopy, and UV-V is absorption spectroscopy; basic theory of spectral measurements with emphasis on practical applications.
4383  **Introduction to Mass Spectrometry**  
(2-3) 3 hours credit. Prerequisite: CHE 3224, or consent of instructor.  
The basic principles of interpreting mass spectra and how they are produced. The effect the method of ion production has on the observed mass spectra, and the theory and operation of various types of mass spectrometers will be covered. The basic theory of ion-molecule reactions and principles and practice of biological mass spectrometry and other advanced topics will be presented.

4403  **Chemistry of Heterocyclic Compounds**  
(3-0) 3 hours credit. Prerequisite: CHE 2303 or consent of instructor.  
The chemistry of nitrogen, oxygen, and sulfur heterocycles. Five- and six-membered ring systems with one or more heteroatoms. Applications in the field of synthetic drugs.

4603  **Synthesis and Biosynthesis of Natural Products**  
(2-3) 3 hours credit. Prerequisites: CHE 4243; BIO 3513 is recommended or consent of instructor.  
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.

4911-3  **Independent Study**  
1 to 3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the Department Chair and Dean of the college in which this 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 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4923  **Special Project in Chemistry**  
3 hours credit. Prerequisite: Consent of Department Chair (form available in department office).  
A special laboratory research or library readings project under the direction of a faculty member that results in a report. Limited to science majors in their final year of undergraduate study.

4953  **Special Studies in Chemistry**  
(3-0) 3 hours credit. Prerequisites: 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 may be repeated for credit when the topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4971  **Proseminar**  
(0-3) 1 hour credit. Prerequisites: CHE 2303 and either CHE 3204 or CHE 3124.  
Oral reports on current publications in chemistry and chemical technology using important chemical reference materials and periodicals. May be repeated for credit, but only 2 semester credit hours may be applied toward the degree.

4993  **Honors Research**  
3 hours credit. Prerequisites: 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 only once with approval.
DEPARTMENT OF COMPUTER SCIENCE

The Department of Computer Science offers a Bachelor of Science degree in Computer Science with a strong technical emphasis on modern computing and systems. The degree program offers students the opportunity to prepare for careers in high-technology companies, business, government, and teaching, and to prepare for advanced graduate study. The department also offers a Minor in Computer Science.

Bachelor of Science Degree in Computer Science

The Bachelor of Science degree in Computer Science requires a minimum of 126 semester credit hours, including the Core Curriculum requirements.

All majors in computer science are required to complete all required and elective computer science courses with a grade of “C” or better.

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Science degree in Computer Science must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| Rhetoric (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| Domain I: Mathematics and Science | Mathematics (3 semester credit hours)  
MAT 1214 Calculus I  
Science (6 semester credit hours)  
PHY 1904 Technical Physics I  
PHY 1924 Technical Physics II |
| Domain II: Society and Culture | United States History and Diversity (6 semester credit hours)  
Any six hours listed under this section in the list of core courses will satisfy this core requirement.  
Political Studies (6 semester credit hours)  
POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.  
Social and Behavioral Sciences (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
Economics (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
Degree Requirements

A. 72 semester credit hours of required courses (this also satisfies the 9 hours of Core Curriculum requirements for Domain I):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 1713</td>
<td>Introduction to Computer Science and Recitation</td>
</tr>
<tr>
<td>CS 1711</td>
<td>Introduction to Programming.</td>
</tr>
<tr>
<td>CS 1723</td>
<td>Data Structures and Recitation</td>
</tr>
<tr>
<td>CS 2213</td>
<td>Advanced Programming and Recitation</td>
</tr>
<tr>
<td>CS 2413</td>
<td>Systems Programming and Recitation</td>
</tr>
<tr>
<td>CS 2513</td>
<td>Computer Organization I and Recitation</td>
</tr>
<tr>
<td>CS 2733</td>
<td>Computer Organization II and Recitation</td>
</tr>
<tr>
<td>CS 3233</td>
<td>Discrete Mathematical Structures and Recitation</td>
</tr>
<tr>
<td>CS 3343</td>
<td>Analysis of Algorithms and Recitation</td>
</tr>
<tr>
<td>CS 3723</td>
<td>Programming Languages and Recitation</td>
</tr>
<tr>
<td>CS 3733</td>
<td>Operating Systems and Recitation</td>
</tr>
<tr>
<td>CS 4753</td>
<td>Computer Architecture and Recitation</td>
</tr>
<tr>
<td>CS 4873</td>
<td>Computer Networks</td>
</tr>
<tr>
<td>MAT 1214</td>
<td>Calculus I (The student who is not prepared to begin MAT 1214 must take MAT 1093 Precalculus.)</td>
</tr>
<tr>
<td>MAT 1223</td>
<td>Calculus II</td>
</tr>
<tr>
<td>MAT 2213</td>
<td>Calculus III</td>
</tr>
<tr>
<td>MAT 2233</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>STA 3543</td>
<td>Statistical and Experimental Design in Computer Science</td>
</tr>
<tr>
<td>PHY 1904</td>
<td>Technical Physics I</td>
</tr>
<tr>
<td>PHY 1911</td>
<td>Technical Physics I Laboratory</td>
</tr>
<tr>
<td>PHY 1924</td>
<td>Technical Physics II</td>
</tr>
</tbody>
</table>

B. 18 semester credit hours of upper-division computer science courses (not including CS 3133 or CS 4103)

C. 3 semester credit hours of free electives

Minor in Computer Science

All students pursuing the Minor in Computer Science must complete 20 semester credit hours.

A. 16 semester credit hours of required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 1713</td>
<td>Introduction to Computer Science and Recitation</td>
</tr>
<tr>
<td>CS 1711</td>
<td>Introduction to Programming.</td>
</tr>
<tr>
<td>CS 1723</td>
<td>Data Structures and Recitation</td>
</tr>
<tr>
<td>CS 2213</td>
<td>Advanced Programming and Recitation</td>
</tr>
<tr>
<td>CS 2413</td>
<td>Systems Programming and Recitation</td>
</tr>
</tbody>
</table>
B. 4 hours of sophomore or higher level CS core or approved upper-division CS electives.

To declare a Minor in Computer Science, obtain advice, or seek approval of substitutions for course requirements, students should consult the College of Sciences Undergraduate Advising Center.

COURSE DESCRIPTIONS
COMPUTER SCIENCE
(CS)

1023 Cultural Implications of the Information Society
(3-0) 3 hours credit.
This course offers an examination of the modern information society and the influences of technological advances on society and culture. The emphasis is on information and its management from ethical, social, and legal perspectives. Students will make extensive use of the World Wide Web. [TCCN: COSC 1300.]

1033 Microcomputer Applications
(3-0) 3 hours credit.
Study of the uses of the computer and the organization and visualization of data. Topics will be selected from library searching, networking, e-mail, spreadsheets, databases, authoring packages, multimedia and hypertext applications, presentation graphics, and legal/ethical issues. May not be applied toward a major in computer science. (Formerly CS 2083. Credit cannot be earned for both CS 2083 and CS 1033.)

1063 Introduction to Computer Programming
(3-0) 3 hours credit. Prerequisite: MAT 1023 or the equivalent.
A course in computer programming for those who have never programmed a computer before, developing elementary programming skills using a modern computer language such as Java.

1073 Introductory Computer Programming for Scientific Applications
(3-0) 3 hours credit. Prerequisite: MAT 1023.
Introductory programming. Sorting and ranking, plotting, numerical taxonomy, solution of nonlinear equations, linear regression, and solution of linear systems. May not be applied toward a major in computer science.

1711 Introduction to Computer Science Recitation
(1-0) 1 hour credit. Prerequisite: MAT 1093. Concurrent enrollment in CS 1713 is required. Recitation to accompany CS 1713. (Credit cannot be earned for both CS 1711 and CS 1714.)

1713 Introduction to Computer Science
(3-0) 3 hours credit. Prerequisites: MAT 1093 and either CS 1063 or previous programming experience. Concurrent enrollment in CS 1711 is required.
Introduction to basic concepts of computer science. Data representation, problem-solving methods, algorithm development and implementation. Basic concepts of object-oriented design are integrated throughout the course. (Formerly CS 1714. Credit cannot be earned for both CS 1714 and CS 1713.)

1721 Data Structures Recitation
(1-0) 1 hour credit. Prerequisites: CS 1711, CS 1713, and MAT 1214. Concurrent enrollment in CS 1723 is required. Recitation to accompany CS 1723. (Formerly CS 1724. Credit cannot be earned for both CS 1721 and CS 1724.)

1723 Data Structures
(3-0) 3 hours credit. Prerequisites: CS 1711, CS 1713, and MAT 1214. Concurrent enrollment in CS 1721 is required. Abstract data structures (stacks, queues, lists, trees), recursion, sorting, and searching. Object-oriented design and implementation of data structures. (Credit cannot be earned for both CS 1723 and CS 1724.)
2073 Computer Programming with Engineering Applications
(3-0) 3 hours credit. Prerequisites: MAT 1214 and completion of or concurrent enrollment in 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 toward a major in computer science.

2211 Advanced Programming Recitation
(1-0) 1 hour credit. Prerequisites: CS 1721 and CS 1723. Concurrent enrollment in CS 2213 is required.
Recitation to accompany CS 2213.

2213 Advanced Programming
(3-0) 3 hours credit. Prerequisites: CS 1721 and CS 1723. Concurrent enrollment in CS 2211 is required.
Further application of programming techniques in a specific programming language. Continuation of data structures
(graphs, B-trees, matrices), and file and memory management.

2411 Systems Programming Recitation
(1-0) 1 hour credit. Prerequisites: CS 2211 and CS 2213. Concurrent enrollment in CS 2413 is required.
Recitation to accompany CS 2413.

2413 Systems Programming
(3-0) 3 hours credit. Prerequisites: CS 2211 and CS 2213. Concurrent enrollment in CS 2411 is required.
A study of systems-level programming in a specific system (at present, Unix). Focus on concepts and tools to support
the construction of systems programs.

2511 Computer Organization I Recitation
(1-0) 1 hour credit. Prerequisites: CS 1711 and CS 1713. Concurrent enrollment in CS 2513 is required.
Recitation to accompany CS 2513. (Credit cannot be earned for both CS 2514 and CS 2511.)

2513 Computer Organization I
(3-0) 3 hours credit. Prerequisites: CS 1711 and CS 1713. Concurrent enrollment in CS 2511 is required.
Introduction to digital logic design. Combinational and sequential circuits. Designing with MSI components. State
machine design.(Formerly CS 2514. Credit cannot be earned for both CS 2513 and CS 2514.)

2731 Computer Organization II Recitation
(1-0) 1 hour credit. Prerequisites: CS 1721, CS 1723, CS 2511, and CS 2513. Concurrent enrollment in CS 2733 is
required.
Recitation to accompany CS 2733. (Credit cannot be earned for both CS 2731 and CS 2734.)

2733 Computer Organization II
(3-0) 3 hours credit. Prerequisites: CS 1721, CS 1723, CS 2511, and CS 2513. Concurrent enrollment in CS 2731 is
required.
Assembly language programming and computer organization. (Formerly CS 2734. Credit cannot be earned for both
CS 2733 and CS 2734.)

3133 Computers and Society
(3-0) 3 hours credit. Prerequisite: Consent of instructor or one of the following courses: CS 1033, CS 1063, CS 1073,
CS 1713, or CS 2073.
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.

3231 Discrete Mathematical Structures Recitation
(1-0) 1 hour credit. Prerequisites: CS 1721, CS 1723, and MAT 1223. Concurrent enrollment in CS 3233 is required.
Recitation to accompany CS 3233.
3233  **Discrete Mathematical Structures**  
(3-0) 3 hours credit. Prerequisites: CS 1721, CS 1723, and MAT 1223. Concurrent enrollment in CS 3231 is required. Survey and development of theoretical tools suitable for describing algorithmic applications. Propositional and predicate calculus, induction, proofs, set theory, and finite state automata.

3323  **Topics in Programming Languages**  
(3-0) 3 hours credit. Prerequisites: CS 2411 and CS 2413. Study of two or three languages important to the computer science curriculum. (Credit cannot be earned for both CS 3323 and CS 3321.)

3341  **Analysis of Algorithms Recitation**  
(1-0) 1 hour credit. Prerequisites: CS 2411, CS 2413, CS 3231, CS 3233, and MAT 2213. Concurrent enrollment in CS 3343 is required. Recitation to accompany CS 3343.

3343  **Analysis of Algorithms**  
(3-0) 3 hours credit. Prerequisites: CS 2411, CS 2413, CS 3231, CS 3233, and MAT 2213. Concurrent enrollment in CS 3341 is required. Analysis of the performance of algorithms; discussion of programming techniques and data structures used in the writing of effective algorithms. (Credit cannot be earned for both CS 3343 and CS 4323.)

3413  **Data Communications**  
(3-0) 3 hours credit. Prerequisites: CS 2731 and CS 2733 or consent of 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.

3721  **Programming Languages Recitation**  
(1-0) 1 hour credit. Prerequisites: CS 2211, CS 2213, CS 3231, and CS 3233. Concurrent enrollment in CS 3723 is required. Recitation to accompany CS 3723.

3723  **Programming Languages**  
(3-0) 3 hours credit. Prerequisites: CS 2211, CS 2213, CS 3231, and CS 3233. Concurrent enrollment in CS 3721 is required. 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.

3731  **Operating Systems Recitation**  
(1-0) 1 hour credit. Prerequisites: CS 2411, CS 2413, CS 2731, CS 2733, CS 3231, and CS 3233. Concurrent enrollment in CS 3733 is required. Recitation to accompany CS 3733.

3733  **Operating Systems**  
(3-0) 3 hours credit. Prerequisites: CS 2411, CS 2413, CS 2731, CS 2733, CS 3231, and CS 3233. Concurrent enrollment in CS 3731 is required. An introduction to the functions and major techniques of a modern multiprogramming operating system. Includes exposure to the fundamentals of processor management, process synchronization, memory management, and peripheral management.
3743 **Introduction to Database Systems**  
(3-0) 3 hours credit. Prerequisites: CS 2411, CS 2413, CS 3231, and CS 3233.  
Study of fundamentals of database systems. Topics include basic concepts, various data models, database design, storage systems, indexing and hashing, database application design and implementation, and commercially available database systems.

3773 **Software Engineering**  
(3-0) 3 hours credit. Prerequisites: CS 3341 and CS 3343.  
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 3341 and CS 3343.  
Discussion of theorem-proving by machine; includes computational linguistics, psychological modeling, and computer games.

4103 **Ethical and Social Issues in Computer Science**  
(3-0) 3 hours credit. Prerequisites: CS 3731 and 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 databases, networks, artificial intelligence, and computer security. Legal issues are also covered.

4313 **Automata, Computability, and Formal Languages**  
(3-0) 3 hours credit. Prerequisites: CS 3341 and CS 3343.  
Discussion of abstract machines (finite state automata, pushdown automata, and Turing machines), formal grammars (regular, context-free, and type 0), and the relationship among them.

4353 **Unix and Network Security**  
(3-0) 3 hours credit. Prerequisites: CS 3731 and CS 3733.  
A technical survey of the fundamentals of computer and information security. Issues include cryptography, authentication, attack techniques at both the OS and network level, defense techniques, intrusion detection, scan techniques and detection, forensics, denial of service techniques and defenses, libpcap and libnet programming.

4363 **Cryptography**  
(3-0) 3 hours credit. Prerequisites: CS 3341, CS 3343, CS 3731, and CS 3733.  
A course in pure and applied cryptography, with emphasis on theory. Topics may include conventional and public-key cryptosystems, signatures, pseudo-random sequences, hash functions, key management, and threshold schemes.

4383 **Computer Graphics**  
(3-0) 3 hours credit. Prerequisites: CS 3341, CS 3343, 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.

4393 **Topics in User Interfaces**  
(3-0) 3 hours credit. Prerequisites: CS 3731 and CS 3733.  
Study of advanced user interface issues. Topics will be selected from user interface design, human factors, window systems and toolkits, GUI programming models, and input devices, psychological aspects of human-computer interaction, and the psychology of computer users.

4633 **Simulation**  
(3-0) 3 hours credit. Prerequisites: CS 3341, CS 3343 and STA 3543.  
Design, execution and analysis of simulation models, discrete event simulation techniques, input and output analysis, random numbers, and simulation tools and languages.
4713 Compiler Writing
(3-0) 3 hours credit. Prerequisites: CS 2731, CS 2733, CS 3341, and CS 3343.
An introduction to implementation of translators. Topics include formal grammars, scanners, parsing techniques, syntax-directed translation, symbol table management, code generation, and code optimization.

4751 Computer Architecture Recitation
(1-0) 1 hour credit. Prerequisites: CS 2731, CS 2733, CS 3731, and CS 3733. Concurrent enrollment in CS 4753 is required.
Recitation to accompany CS 4753.

4753 Computer Architecture
(3-0) 3 hours credit. Prerequisites: CS 2731, CS 2733, CS 3731, and CS 3733. Concurrent enrollment in CS 4751 is required.
Instruction set architecture, datapath and control unit design, advanced computer arithmetic, pipelining, memory hierarchy and I/O subsystem, performance issues.

4763 Multimedia Systems
(3-0) 3 hours credit. Prerequisites: CS 3731 and CS 3733.
Multimedia hardware capabilities. Sound and video generation and editing. Multimedia applications development and toolkits. Analysis of operational characteristics of multimedia systems.

4773 Object-Oriented Systems
(3-0) 3 hours credit. Prerequisite: CS 3773.
Study of object-oriented concepts and techniques, encapsulation, inheritance mechanisms, polymorphism, and programming in one or more object-oriented languages.

4793 Introduction to Artificial Neural Networks
(3-0) 3 hours credit. Prerequisite: CS 3793.
Analysis of biological nervous systems, supervised and unsupervised training algorithms, Perceptrons and threshold logic-based systems, associative memories, nonlinear regression, and backpropagation learning methods.

4823 Introduction to Parallel Programming
(3-0) 3 hours credit. Prerequisites: CS 3341, CS 3343, CS 3731, and CS 3733.
Parallel programming concepts (partitioning, synchronization and communication, programming models-shared memory based and message based), programming tools and languages, performance issues.

4873 Computer Networks
(3-0) 3 hours credit. Prerequisites: CS 3731, CS 3733, and STA 3543.
Discussion of standard network layers, including issues of topology, error detection and recovery, congestion control, and hardware interfacing.

4901 Seminar in Computer Science
(1-0) 1 hour credit. Prerequisite: Upper-division classification in computer science program or consent of instructor.
Scheduled and impromptu presentations on subjects of interest given by department faculty and visiting lecturers.
May be repeated for credit, but no more than 3 semester credit hours will apply toward the major in computer science.

4913 Independent Study
3 hours credit. Prerequisite: Permission in writing (form available) from the instructor, the student’s advisor, the Department Chair 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 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.
4933 Internship in Computer Science
3 hours credit. Prerequisites: Junior or senior standing, an overall 2.5 grade point average, and permission in writing from the instructor, the Department Chair, and the Dean of the College of Sciences. The opportunity for a semester-long work experience in a private business or public agency in a computer science-related position. No more than 3 hours of CS 4933 and no more than a total of 6 hours of CS 4933 and independent study courses may count toward a Bachelor of Science degree in Computer Science. The grade report for this course is either CR (satisfactory participation in the internship) or NC (unsatisfactory participation in the internship).

4953 Special Studies in Computer Science
(3-0) 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 may be repeated for credit when topics vary, but not more than 6 semester credit 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 their last two semesters; approval by the College Honors Committee. Supervised research and preparation of an honors thesis. May be repeated one time with approval.
DEPARTMENT OF EARTH AND ENVIRONMENTAL SCIENCE

The degree programs offered by the Department of Earth and Environmental Science 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 basic science curriculum allows students to apply for entry into one of several highly specialized areas in geology or environmental science. Students who have majored in either of these degree programs are eligible to apply for positions in industry and government as well as for entry into professional and graduate schools. The degree in multidisciplinary science gives students broad training in the sciences and is suitable as preparation to teach science at the secondary school level. Students seeking teacher certification should contact the College of Education and Human Development Teacher Advising and Certification Center early in their studies for information about certificate requirements and admission procedures. Undergraduates seeking elementary teacher certification must complete the interdisciplinary studies degree. The department also offers a B.A. and Minor in Geology.

Bachelor of Science Degree in Multidisciplinary Science

The Bachelor of Science degree in Multidisciplinary Science is primarily for students preparing to teach science at the secondary school level. Students seeking teacher certification should also refer to the requirements listed in the College of Education and Human Development portion of the catalog.

The minimum number of semester credit hours required for this degree, including the Core Curriculum requirements, is 122 or 133.

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Science degree in Multidisciplinary Science must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both major requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhetoric (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement:  \nENG 1013 Freshman Composition  \nENG 1023 Discourse across the Disciplines</td>
</tr>
<tr>
<td>Domain I: Mathematics and Science</td>
<td>Mathematics (3 semester credit hours)  \nMAT 1093 Precalculus  \nScience (6 semester credit hours)  \nThe core curriculum science requirement is automatically fulfilled in obtaining a B.S. degree in Multidisciplinary Science.</td>
</tr>
</tbody>
</table>
Degree Requirements

A. 44 or 46 semester credit hours of required science courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>AST 1013, 1031</td>
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<tr>
<td>BIO 1113, 1122</td>
<td></td>
</tr>
<tr>
<td>BIO 2123</td>
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<tr>
<td>CHE 1103, 1122</td>
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<td>CHE 1303, 1312</td>
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<tr>
<td>GEO 1103, 1111</td>
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<tr>
<td>GEO 1123, 1131</td>
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<tr>
<td>GRG 3713</td>
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<tr>
<td>ES or GEO 4193</td>
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Either

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHY 1603, 1611</td>
<td></td>
</tr>
<tr>
<td>PHY 1623, 1631</td>
<td></td>
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</tbody>
</table>

or

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHY 1904, 1911</td>
<td></td>
</tr>
<tr>
<td>PHY 924, 1931</td>
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</tr>
</tbody>
</table>

* Technical Physics is the required option for concentration in chemistry or physics. Note that the prerequisites for technical physics are Calculus I and II (MAT 1214 and MAT 1223). These can be included among the election courses in sciences and mathematics.

B. 21 semester credit hours of approved electives in geology, biology, chemistry, physics, environmental science, and/or mathematics; 12 of these hours must be at the upper-division level.

Areas of specialization are available in biology, chemistry, geology, and physics. Students seeking certification should select one of these as their primary science and should select the corresponding certification program within the Education program.
Area of specialization in science-biology. 16 semester credit hours above required science courses.

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO</td>
<td>Drugs and Society</td>
</tr>
<tr>
<td>BIO</td>
<td>Biology II</td>
</tr>
<tr>
<td>BIO</td>
<td>Comparative Anatomy of Vertebrates Laboratory</td>
</tr>
<tr>
<td>BIO</td>
<td>Genetics</td>
</tr>
<tr>
<td>BIO</td>
<td>Principles of Ecology and Laboratory</td>
</tr>
</tbody>
</table>

Area of specialization in science-chemistry.* 15 semester credit hours above required sciences.

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE</td>
<td>Organic Chemistry I and Laboratory</td>
</tr>
<tr>
<td>CHE</td>
<td>Analytical Chemistry</td>
</tr>
<tr>
<td>CHE</td>
<td>Descriptive Inorganic Chemistry</td>
</tr>
<tr>
<td>CS</td>
<td>Microcomputer Applications</td>
</tr>
</tbody>
</table>

Area of specialization in science-geology. 15 semester credit hours above required science courses.

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO</td>
<td>Introduction to Rocks and Minerals, and Laboratory</td>
</tr>
<tr>
<td>GEO</td>
<td>Paleontology and Laboratory</td>
</tr>
<tr>
<td>GEO</td>
<td>Oceanography</td>
</tr>
</tbody>
</table>

And 4 semester credit hours of upper-division electives in geology.

Area of specialization in science-physics.* 15 semester credit hours above required science courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY</td>
<td>Modern Physics</td>
</tr>
<tr>
<td>PHY</td>
<td>Computer Visualization of Physics</td>
</tr>
<tr>
<td>PHY</td>
<td>Classical Mechanics I</td>
</tr>
<tr>
<td>PHY</td>
<td>Environmental Physics</td>
</tr>
</tbody>
</table>

And 3 semester credit hours of upper-division electives in physics.

C. 21 to 30 semester credit hours of electives, as set forth below:

1. For students seeking the degree only (without teacher certification), at least 21 semester credit hours of electives are required, including a sufficient number of upper-division hours to meet UTSA minimum of 39 upper-division hours.

2. For students seeking the degree with teacher certification, these electives must include:

   - CS 1033 Microcomputer Applications

   Either
   - COM 1043 Introduction to Communication
   - COM 2123 Oral Interpretation

   and 24 semester credit hours of professional education courses.
Bachelor of Science Degree in Geology

The Bachelor of Science degree in Geology provides opportunities to prepare for careers in petroleum, mining, water resources, environmental management, governmental agencies, engineering geology, geochemistry, geophysics, and natural resources.

The minimum number of semester credit hours required for this degree, including the Core Curriculum requirements, is 124 to 127.

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Science degree in Geology must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | **Mathematics** (3 semester credit hours)  
The core curriculum mathematics requirement is automatically fulfilled in obtaining a B.S. degree in Geology.  
**Science** (6 semester credit hours)  
The core curriculum science requirement is automatically fulfilled in obtaining a B.S. degree in Geology. |
| **Domain II: Society and Culture** | **United States History and Diversity** (6 semester credit hours)  
Any six hours listed under this section in the list of core courses will satisfy this core requirement.  
**Political Studies** (6 semester credit hours)  
POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.  
**Social and Behavioral Sciences** (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
**Economics** (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
| **Domain III: Literature and the Arts** | **Literature** (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement.  
**The Arts** (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
| **Domain IV: Interdisciplinary Studies** | (3 semester credit hours)  
Any three hours listed under this section in the list of core courses will satisfy this core requirement. |
Degree Requirements

A. 52 semester credit hours in geology completed with a grade of “C” or better:

1. 43 semester credit hours of required courses:

   GEO 1103, 1111  Introduction to Earth Systems and Laboratory
   GEO 1123, 1131  Earth History and Laboratory
   GEO 2003, 2011  Mineralogy and Laboratory
   GEO 2023, 2031  Optical Mineralogy and Laboratory
   GEO 3043, 3052  Petrology and Laboratory
   GEO 3063, 3071  Paleontology and Laboratory
   GEO 3103, 3111  Structural Geology and Laboratory
   GEO 3123, 3131  Sedimentary Geology and Laboratory
   GEO 3374  Geochemistry
   GEO 4946  Field Geology

2. 9 additional semester credit hours selected from the following (a maximum of 3 hours from either GEO 4911-3 or 4951-3 may apply to this requirement):

   GEO 3083, 3091  Stratigraphy and Laboratory
   GEO 3113  Geologic Field Investigations
   GEO 3143, 3151  Economic Geology and Laboratory
   GEO 3163  Oceanography
   GEO 3383  General Geophysics
   GEO 4013  Volcanology
   GEO 4023  Engineering Geology
   GEO 4063  Principles of Environmental Geology
   GEO 4113, 4121  Geomorphology and Laboratory
   GEO 4623  Ground-Water Hydrology
   GEO 4803  X-Ray Crystallography
   GEO 4911-3  Independent Study
   GEO 4951-3  Special Studies in Geology
   GEO 4993  Honors Research

B. 27 to 30 required semester credit hours in the College of Sciences:

   CHE 1103  General Chemistry I
   CHE 1303  General Chemistry II
   ES 4043  Introduction to Geographic Information Systems (GIS)
   CS 1063  Introduction to Computer Programming
   CS 1073  Introductory Computer Programming for Scientific Applications
   CS 1713, 1711  Introduction to Computer Science and Recitation
   MAT 1214  Calculus I
   MAT 1223  Calculus II
Either

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 1904, 1911</td>
<td>Technical Physics I and Laboratory</td>
</tr>
<tr>
<td>PHY 1924, 1931</td>
<td>Technical Physics II and Laboratory</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>PHY 1603, 1611</td>
<td>General Physics I and Laboratory</td>
</tr>
<tr>
<td>PHY 1623, 1631</td>
<td>General Physics II and Laboratory</td>
</tr>
</tbody>
</table>

C. 12 semester credit hours of electives

**Bachelor of Arts Degree in Geology**

The Bachelor of Arts degree in Geology provides opportunities to prepare for careers in fields such as earth science education, law, insurance, financial services, and environmental management. It is not recommended for students planning to pursue careers as professional geologists or graduate studies in geology or related fields.

The minimum number of semester credit hours required for this degree, including the Core Curriculum requirements, is 120.

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

**Core Curriculum requirements:** Students seeking the Bachelor of Arts degree in Geology must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rhetoric (6 semester credit hours)</strong></td>
<td>All students must take the following six hours to meet this core requirement:</td>
</tr>
<tr>
<td></td>
<td>ENG 1013 Freshman Composition</td>
</tr>
<tr>
<td></td>
<td>ENG 1023 Discourse across the Disciplines</td>
</tr>
<tr>
<td><strong>Domain I: Mathematics and Science (3 semester credit hours)</strong></td>
<td>Mathematics, The core curriculum mathematics requirement is automatically fulfilled in obtaining a B.A. degree in Geology.</td>
</tr>
<tr>
<td></td>
<td>Science, The core curriculum science requirement is automatically fulfilled in obtaining a B.A. degree in Geology.</td>
</tr>
<tr>
<td><strong>Domain II: Society and Culture (6 semester credit hours)</strong></td>
<td>United States History and Diversity, Any six hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td>Political Studies, POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td>Social and Behavioral Sciences, Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td>Economics, Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>
Degree Requirements

A. 45 semester credit hours of geology:

1. 33 semester credit hours of required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 1103, 1111</td>
<td>Introduction to Earth Systems and Laboratory</td>
</tr>
<tr>
<td>GEO 1123, 1131</td>
<td>Earth History and Laboratory</td>
</tr>
<tr>
<td>GEO 3063, 3071</td>
<td>Paleontology and Laboratory</td>
</tr>
<tr>
<td>GEO 3123, 3131</td>
<td>Sedimentary Geology and Laboratory</td>
</tr>
<tr>
<td>GEO 3163</td>
<td>Oceanography</td>
</tr>
<tr>
<td>GEO 3203, 3211</td>
<td>Introduction to Rocks and Minerals and Laboratory</td>
</tr>
<tr>
<td>GEO 4063</td>
<td>Principles of Environmental Geology</td>
</tr>
<tr>
<td>GEO 4113, 4121</td>
<td>Geomorphology and Laboratory</td>
</tr>
<tr>
<td>ES 4043</td>
<td>Introduction to Geographic Information Systems (GIS)</td>
</tr>
</tbody>
</table>

2. 12 additional semester credit hours selected from the following (a maximum of 3 hours from either GEO 4911-3 or 4953 may apply to this requirement):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 3083, 3091</td>
<td>Stratigraphy and Laboratory</td>
</tr>
<tr>
<td>GEO 3103, 3111</td>
<td>Structural Geology and Laboratory</td>
</tr>
<tr>
<td>GEO 3113</td>
<td>Geological Field Investigations</td>
</tr>
<tr>
<td>GEO 3143, 3151</td>
<td>Economic Geology and Laboratory</td>
</tr>
<tr>
<td>GEO 3323, 3331</td>
<td>Global Tectonism and Geologic Processes and Laboratory</td>
</tr>
<tr>
<td>GEO 3163</td>
<td>Oceanography</td>
</tr>
<tr>
<td>GEO 3374</td>
<td>Geochemistry</td>
</tr>
<tr>
<td>GEO 4023</td>
<td>Engineering Geology</td>
</tr>
<tr>
<td>GEO 4623</td>
<td>Ground-Water Hydrology</td>
</tr>
<tr>
<td>GEO 4911-3</td>
<td>Independent Study</td>
</tr>
<tr>
<td>GEO 4951-3</td>
<td>Special Studies in Geology</td>
</tr>
<tr>
<td>GEO 4993</td>
<td>Honors Research</td>
</tr>
</tbody>
</table>

B. 20 to 22 semester credit hours in the College of Sciences:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 1103</td>
<td>General Chemistry I</td>
</tr>
<tr>
<td>CHE 1303</td>
<td>General Chemistry II</td>
</tr>
<tr>
<td>CHE 1312</td>
<td>General Chemistry II Laboratory</td>
</tr>
</tbody>
</table>

Either

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 1312</td>
<td>General Chemistry II Laboratory</td>
</tr>
<tr>
<td>or</td>
<td>GEO 3374 Geochemistry</td>
</tr>
</tbody>
</table>

Domain III: Literature and the Arts

<table>
<thead>
<tr>
<th>Literature (3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

The Arts (3 semester credit hours)

<table>
<thead>
<tr>
<th>The Arts (3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
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</tbody>
</table>

Domain IV: Interdisciplinary Studies

<table>
<thead>
<tr>
<th>Interdisciplinary Studies (3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

UTSA 2002–2004 Undergraduate Catalog
MAT 1214 Calculus I
PHY 1603, 1611 General Physics I and Laboratory
PHY 1623, 1631 General Physics II and Laboratory

C. 22 semester credit hours of electives, three of which must be at the upper-division level to meet UTSA's minimum of 39 upper-division hours.

Minor in Geology

All students pursuing the Minor in Geology must complete 22 semester credit hours.

A. 16 semester credit hours of required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 1103, 1111</td>
<td>Introduction to Earth Systems and Laboratory</td>
</tr>
<tr>
<td>GEO 1123, 1131</td>
<td>Earth History and Laboratory</td>
</tr>
<tr>
<td>GEO 3203, 3211</td>
<td>Introduction to Rocks and Minerals</td>
</tr>
<tr>
<td>GEO 2003, 2011</td>
<td>Mineralogy and Laboratory</td>
</tr>
<tr>
<td>GEO 3303, 3311</td>
<td>Introduction to Paleontology and Laboratory</td>
</tr>
<tr>
<td>GEO 3063, 3071</td>
<td>Paleontology and Laboratory</td>
</tr>
</tbody>
</table>

B. 6 semester credit hours of approved upper-division geology electives

To declare a Minor in Geology, obtain advice, or seek approval of substitutions for course requirements, students should consult the College of Sciences Undergraduate Advising Center.

COURSE DESCRIPTIONS
GEOLOGY (GEO)

1013 The Third Planet
(3-0) 3 hours credit.
Evolution of ideas concerning the earth’s origin, structure, and age; social impact of recognizing the antiquity of the planet and humankind’s brief presence; examination of how the distribution of planetary resources influenced the rise and clash of civilizations. May not be applied to a major in geology. May apply toward the Level I Core Curriculum requirement in science. [TCCN: GEOL 1301.]

1103 Introduction to Earth Systems
(3-0) 3 hours credit. Prerequisite: Successful completion of the following Core Curriculum requirement: MAT 1023 or above.
The earth as a dynamic planet; relation of the earth’s present processes to its resources, structure, and internal composition. Nature of minerals and rocks, the hydrosphere, tectonics, earthquakes, volcanism, and surface features of the earth. Concurrent enrollment in GEO 1111 recommended. May apply toward the Level II Core Curriculum requirement in science. (Formerly GEO 1003. Credit cannot be earned for both GEO 1103 and GEO 1003.) [TCCN: GEOL 1303.]
1111 Introduction to Earth Systems Laboratory
(0-3) 1 hour credit. Prerequisite: Completion of or concurrent enrollment in GEO 1103. Relation of the earth’s present processes to its resources, structure, and internal composition. Field trips and laboratory study of minerals, rocks, maps, and aerial and satellite photos. (Formerly GEO 1011. Credit cannot be earned for both GEO 1111 and GEO 1011.) [TCCN: GEOL 1103.]

1123 Earth History
(3-0) 3 hours credit. Prerequisite: Successful completion of the following Core Curriculum requirement: MAT 1023 or above. Formation and evolution of the earth, its life forms, and the major features of its surface. Concurrent enrollment in GEO 1131 recommended. May apply toward the Level II Core Curriculum requirement in science. (Formerly GEO 1023. Credit cannot be earned for both GEO 1123 and GEO 1023.) [TCCN: GEOL 1304.]

1131 Earth History Laboratory
(0-3) 1 hour credit. Prerequisite: Completion of or concurrent enrollment in GEO 1123. Laboratory study of fossils and rock sequences; interpretation of earth history. (Formerly GEO 1031. Credit cannot be earned for both GEO 1131 and GEO 1031.) [TCCN: GEOL 1104.]

2003 Mineralogy
(3-0) 3 hours credit. Prerequisites: CHE 1103, GEO 1103, GEO 1111, MAT 1093, or consent of instructor; concurrent enrollment in GEO 2011. Crystallography, chemistry, physical properties, and origins of minerals. Field trips required.

2011 Mineralogy Laboratory
(0-3) 1 hour credit. Prerequisite: Concurrent enrollment in GEO 2003. Laboratory study of crystal models, crystals, and minerals. Field trips required.

2023 Optical Mineralogy
(3-0) 3 hours credit. Prerequisites: GEO 2003, GEO 2011, and concurrent enrollment in GEO 2031. Principles and methods of optical mineralogy. Optical properties of minerals and microscopic determination of opaque and nonopaque minerals.

2031 Optical Mineralogy Laboratory
(0-3) 1 hour credit. Prerequisites: GEO 2003, GEO 2011, and concurrent enrollment in GEO 2023. Use of the petrographic microscope for the identification of minerals.

3043 Petrology
(3-0) 3 hours credit. Prerequisites: GEO 2023, GEO 2031, and concurrent enrollment in 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, GEO 2031, and concurrent enrollment in GEO 3043. Laboratory study of rocks in hand specimen and thin section. Field trips required.

3063 Paleontology
(3-0) 3 hours credit. Prerequisites: GEO 1103, GEO 1111, GEO 1123, GEO 1131, or consent of instructor; concurrent enrollment in GEO 3071. Study of fossil animals and plants. Emphasis on invertebrate animals. Systematics, biostratigraphy, paleoecology, and evolution of fossil organisms. Field trips required. (Formerly GEO 2063. Credit cannot be earned for both GEO 3063 and GEO 2063.)

3071 Paleontology Laboratory
(0-3) 1 hour credit. Prerequisites: GEO 1103, GEO 1111, GEO 1123, GEO 1131, and concurrent enrollment in GEO 3063. Study of fossil specimens, collections, and preparation techniques. Field trips required. (Formerly GEO 2071. Credit cannot be earned for both GEO 3071 and GEO 2071.)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3083</td>
<td>Stratigraphy</td>
<td>(3-0)</td>
<td>3 hours credit. Prerequisites: GEO 3063, GEO 3071, GEO 3123, and GEO 3131, or consent of instructor; concurrent enrollment in GEO 3091. Application of stratigraphic principles to the interpretation of rocks formed at or near the surface of the earth. Field trips required.</td>
</tr>
<tr>
<td>3091</td>
<td>Stratigraphy Laboratory</td>
<td>(0-3)</td>
<td>1 hour credit. Prerequisite: Concurrent enrollment in GEO 3083. Laboratory study of stratigraphic methods using maps, measured sections, geologic and stratigraphic cross-sections, air photos, seismic data, modeling techniques, systems analysis, and various aspects of sequence stratigraphic analysis. Field trips required.</td>
</tr>
<tr>
<td>3103</td>
<td>Structural Geology</td>
<td>(3-0)</td>
<td>3 hours credit. Prerequisites: GEO 3043, GEO 3052, and concurrent enrollment in GEO 3111. Response of earth materials to natural stresses. Description and origin of geologic structures. Field trips required.</td>
</tr>
<tr>
<td>3111</td>
<td>Structural Geology Laboratory</td>
<td>(0-3)</td>
<td>1 hour credit. Prerequisite: Concurrent enrollment in GEO 3103. Laboratory study of geologic structures using maps, cross-sections, photographs, and descriptive geometric and stereographic methods. Field trips required.</td>
</tr>
<tr>
<td>3113</td>
<td>Geologic Field Investigations</td>
<td>(0-6)</td>
<td>3 hours credit. Prerequisite: Consent of instructor. Field studies of areas of geologic interest; e.g., structural geologic mapping, sedimentary facies analysis, hydrologic studies, etc. May be repeated for credit when topics vary, but not more than 6 semester credit hours may be applied to a B.A. or B.S. in Geology. Concurrent enrollment in GEO 4946 is not permitted. Field trips required.</td>
</tr>
<tr>
<td>3123</td>
<td>Sedimentary Geology</td>
<td>(3-0)</td>
<td>3 hours credit. Prerequisite: Completion of or concurrent enrollment in GEO 3043 and GEO 3052; concurrent enrollment in GEO 3131. 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.</td>
</tr>
<tr>
<td>3131</td>
<td>Sedimentary Geology Laboratory</td>
<td>(0-3)</td>
<td>1 hour credit. Prerequisites: Completion of or concurrent enrollment in GEO 3043, GEO 3052, and GEO 3123. Laboratory studies of sedimentary processes and their products. Hand specimens, thin sections, sedimentary structures, and interpretation of depositional environments. Field trips required.</td>
</tr>
<tr>
<td>3143</td>
<td>Economic Geology</td>
<td>(3-0)</td>
<td>3 hours credit. Prerequisites: GEO 2003, GEO 2011, and concurrent enrollment in GEO 3151. Origin of metallic ore deposits and industrial minerals, including the geology of major metallic deposits and the uses and economics of metals. Field trips required.</td>
</tr>
<tr>
<td>3151</td>
<td>Economic Geology Laboratory</td>
<td>(0-3)</td>
<td>1 hour credit. Prerequisite: 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. Field trips required.</td>
</tr>
<tr>
<td>3163</td>
<td>Oceanography</td>
<td>(3-0)</td>
<td>3 hours credit. Prerequisite: Consent of instructor. General oceanography, with emphasis on marine geology and especially the continental margins. Field trips required.</td>
</tr>
</tbody>
</table>
3203 Introduction to Rocks and Minerals
(3-0) 3 hours credit. Prerequisite: GEO 1103, GEO 1111, CHE 1103, MAT 1023, or consent of instructor.
Description, classification, and origin of common rocks and minerals as well as gemstones and ores. Field trips required. May not be applied toward a B.S. in Geology.

3211 Introduction to Rocks and Minerals Laboratory
(0-3) 1 hour credit. Prerequisite: Concurrent enrollment in GEO 3203.
Laboratory study in hand specimens of common rocks, minerals, gemstones, and ores. May not be applied toward a B.S. in Geology. Field trips required.

3303 Introduction to Paleontology
(3-0) 3 hours credit. Prerequisite: GEO 1103, GEO 1111, CHE 1103, MAT 1023, or consent of instructor.
Description, taxonomy, paleoecology, and correlation techniques of special interests to geoscientists will be introduced. May not be applied toward a B.S. in Geology. Field trips required.

3311 Introduction to Paleontology Laboratory
(0-3) 1 hour credit. Prerequisite: Concurrent enrollment in GEO 3303.
Laboratory study in specimen characteristics, species analysis, collecting, and preservation techniques. May not be applied toward a B.S. in Geology. Field trips required.

3323 Global Tectonism and Geologic Processes
(3-0) 3 hours credit. Prerequisites: GEO 1103, GEO 1111, and MAT 1023 or above.
Global tectonism is a framework for understanding the Earth. Students may explore the evolution of our current global tectonic paradigm from continental drift to plate tectonics. May not be applied toward a B.S. in Geology.

3331 Global Tectonism and Geologic Processes Laboratory
(0-3) 1 hour credit. Prerequisite: Concurrent enrollment in GEO 3323.
Students will study the concepts that underlie global tectonism through the medium of hands-on activities specifically designed for adaptation and use in school classrooms. May not be applied toward a B.S. in Geology.

3374 Geochemistry
(2-4) 4 hours credit. Prerequisite: CHE 1303 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. (Formerly GEO 3373. Credit cannot be earned for both GEO 3374 and GEO 3373.)

3383 General Geophysics
(3-0) 3 hours credit. Prerequisites: GEO 3043 and GEO 3052.
Physics of the earth’s interior, plate tectonics, geomagnetism, gravity, and heat flow.

4013 Volcanology
(3-0) 3 hours credit. Prerequisite: GEO 3043 or GEO 3203
A survey of volcanoes and volcanic processes, including historically important volcanic eruptions and the prediction and mitigation of volcanic hazards. Field trips required.

4023 Engineering Geology
(3-0) 3 hours credit. Prerequisite: PHY 1904, PHY 1603, MAT 1214, or consent of instructor.
Geologic factors in construction. Geotechnical properties of minerals, rocks, and soils. Case studies. Field trips required. (Formerly GEO 3023. Credit cannot be earned for both GEO 4023 and GEO 3023.)

4063 Principles of Environmental Geology
(3-0) 3 hours credit. Prerequisites: GEO 1103 and GEO 1111.
An analysis of human interaction with geologic systems; the risks and effects of natural geologic hazards such as volcanic eruptions, earthquakes, and floods. Topics will include the effects of human activity on natural systems such as groundwater quality and recharge, river systems, and coasts. The meaning of “geologic repository” for human waste disposal and how the concept is applied will also be addressed.
4113 Geomorphology
(3-0) 3 hours credit. Prerequisites: GEO 1103, GEO 1111, and concurrent enrollment in GEO 4121.
Analysis of Cenozoic landform evolution. Field trips required.

4121 Geomorphology Laboratory
(0-3) 1 hour credit. Prerequisites: GEO 1103, GEO 1111, and concurrent enrollment in GEO 4113.
Interpretation of maps and aerial photographs. Field trips required.

4193 Field-Based Inquiry
(2-2) 3 hours credit. Prerequisites: Level II core course science and mathematics requirements.
This course will enable future teachers to integrate fieldwork and inquiry into their curriculum. Observational and
descriptive skills from a field-based research perspective will be emphasized. Mapping techniques will include pace- and-compass mapping, plane table mapping, and an introduction to global positioning system (GPS) and geographic information systems (GIS) mapping. An interdisciplinary approach that explores Earth system interactions will be
highlighted. Students will develop and carry out a research project based upon fieldwork. Students in this course will
spend significant time outdoors traveling over rough terrain. (Same as ES 4193. Credit cannot be earned for both GEO 4193 and ES 4193).

4623 Ground-Water Hydrology
(3-0) 3 hours credit. Prerequisites: GEO 1103, GEO 1111, 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.

4803 X-Ray Crystallography
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
The principles and applications of x-ray diffraction to crystalline materials.

4911-3 Independent Study
1 to 3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student’s advisor, the
Department Chair 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 semester credit hours, regardless of discipline, will apply to a bachelor’s degree in
geology.

4946 Field Geology
(6-12) 6 hours credit. Prerequisites: GEO 3103, GEO 3111, and consent of instructor.
Field mapping and measurements during a seven-week period in summer. (Formerly GEO 4947. Credit cannot be
earned for both GEO 4946 and GEO 4947.)

4951-3 Special Studies in Geology and Environmental Science
(1-0, 2-0, 3-0) 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 may be repeated for credit when the topics vary, but not more than 6
semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4993 Honors Research
3 hours credit. Prerequisites: 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 only once with approval.
COURSE DESCRIPTIONS
ENVIRONMENTAL SCIENCE
(ES)

2013 Introduction to Environmental Systems I
(3-0) 3 hours credit.
An introduction to the biotic principles of man-machine-community interrelationships within the natural and built environments. General attention is given to the biotic concepts of growth, processes, and changes occurring in ecosystems and social structures. Emphasis on understanding system dynamics and their relation to public policy formulation and natural resource use. May apply toward the Level I Core Curriculum requirement in science. (Formerly ENV 2013. Credit cannot be earned for both ES 2013 and ENV 2013.) [TCCN: BIOL 2306.]

2021 Introduction to Environmental Systems I Laboratory
(0-3) 1 hour credit. Concurrent enrollment in ES 2013 is recommended.
Qualitative and quantitative methods in the study of biotic environmental systems.

2023 Introduction to Environmental Systems II
(3-0) 3 hours credit.
An introduction to the biotic principles of man-machine-community interrelationships within the natural and built environments. General attention is given to the environmental abiotic factors including natural hazards (earthquakes, volcanoes, landslides, and floods), pollution processes, energy resources, and changes occurring in ecosystems. Emphasis on understanding system dynamics and their relation to natural resource use.

2031 Introduction to Environmental Systems II Laboratory
(0-3) 1 hour credit. Concurrent enrollment is ES 2023 is recommended.
Qualitative and quantitative methods in the study of biotic environmental systems.

3023 Man and His Natural Resources
(3-0) 3 hours credit.
An in-depth analysis of humankind’s dependency on 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. (Formerly ENV 3023. Credit cannot be earned for both ES 3023 and ENV 3023.)

4043 Introduction to Geographic Information Systems (GIS)
(2-2) 3 hours credit.
An introduction to the computer as a mapping device for the query, analysis, creation, and display of spatially-related environmental data. This course teaches GIS fundamentals with the widely used GIS software ArcView. Additional topics include using the Global Positioning System (GPS) for data acquisition.

4053 Advanced Geographic Information Systems
(2-2) 3 hours credit. Prerequisite: ES 4043 or consent of instructor.
Geographic Information Systems (GIS) are an excellent tool for modeling, analyzing, and managing environmental systems. This course teaches advanced concepts and applications of industry standard GIS software in an environmental context. Additional topics include data creation with Global Positioning System (GPS), digitizing, remote sensing, Graphical User Interface (GUI) manipulation, and scripting.

4063 Global Positioning System (GPS) Mapping
(2-2) 3 hours credit.
Students will the opportunity to learn methods for using the space-based Global Positioning System for navigation and for the creation of natural resource inventory maps. Course will cover topics such as base station and rover operations, differential correction of data, creation of data dictionaries, accuracy, mapping under adverse conditions, etc. Students in this course will spend significant time outdoors traveling over rough terrain. Students successfully completing this course will receive Trimble GPS certification.
4083  Advanced Global Positioning System (GPS) Mapping  
(2-2) 3 hours credit. Prerequisite: ES 4063 or consent of instructor.  
Advanced techniques for data collection utilizing a variety of Global Positioning System receivers. Topics include 
acquisition of sub-centimeter data, determination of accuracy and precision, advanced receiver configurations, 
application development and precision agriculture. Students in this course will spend significant time outdoors 
traveling over rough terrain.

4093  Remote Sensing  
(2-2) 3 hours credit.  
Methods for interpreting remotely sensed environmental data such as satellite and aerial photograph imagery. Topics 
covered include photo interpretation, determination of scale, photogrammetric correction, land-cover and land-use 
classification. The use of image analysis software will also be studied.

4193  Field-Based Inquiry  
(2-2) 3 hours credit. Prerequisite: Level II core course science and math requirements.  
This course will enable future teachers to integrate fieldwork and inquiry into their curriculum. Observational and 
descriptive skills from a field-based research perspective will be emphasized. Mapping techniques will include pace-
and-compass mapping, plane table mapping, and an introduction to global positioning system (GPS) and geographic 
information systems (GIS) mapping. An interdisciplinary approach that explores Earth system interactions will be 
highlighted. Students will develop and carry out a research project based upon fieldwork. Students in this course will 
spend significant time outdoors traveling over rough terrain. (Same as GEO 4193. Credit cannot be earned for both 
ES 4193 and GEO 4193).

4911-3 Independent Study  
1 to 3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student’s advisor, the 
Department Chair 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 semester credit hours, regardless of discipline, will apply to a bachelor’s degree in 
geology.

4951-3 Special Studies in Environmental Science  
(1-0, 2-0, 3-0) 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 may be repeated for credit when the topics vary, but not more than 6 
semester credit hours, regardless of discipline, will apply to a bachelor’s degree.
DEPARTMENT OF MATHEMATICS

The Department of Mathematics offers a Bachelor of Science degree in Mathematics. The degree is offered in two concentrations: Mathematics and General Mathematical Studies. The Mathematics Concentration offers students the opportunity to prepare to provide technical support and do research for high-technology industries, government, and private companies; to teach mathematics at the secondary level; and to pursue advanced graduate study. The General Mathematical Studies Concentration is designed primarily for those students wishing to teach mathematics at the secondary level. The department also offers a Minor in Mathematics. Students interested in electives in Statistics, a minor in Applied Statistics, or a Bachelor of Science degree in Statistics, should see the Department of Management Sciences and Statistics in the College of Business (pp. 75–82).

Bachelor of Science Degree in Mathematics

The Bachelor of Science degree in Mathematics is offered with two concentrations: Mathematics and General Mathematical Studies.

The minimum number of semester credit hours required for this degree, including the Core Curriculum requirements, is 126. Thirty-nine of the total semester credit hours required for the degree must be at the upper-division level.

Students choosing the General Mathematical Studies Concentration should satisfy the Core Curriculum requirements consistent with the State Board for Educator Certification.

All required and elective mathematics and statistics courses must be completed with a grade of “C” or better.

All candidates for this degree must fulfill the Core Curriculum requirements and the mathematics requirements, which are listed in the following pages. In addition, a candidate for the Bachelor of Science degree in Mathematics must complete the course requirements for the concentration declared by the candidate.

Core Curriculum requirements: Students seeking the Bachelor of Science Degree in Mathematics must fulfill University Core Curriculum requirements. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
 ENG 1013 Freshman Composition  
 ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | **Mathematics** (3 semester credit hours)  
This requirement can be satisfied with MAT 1214 for mathematics majors. (Students not prepared to begin MAT 1214 must take MAT 1093 Precalculus.)  
**Science** (6 semester credit hours)  
Three hours from Level One and three hours from Level Two will satisfy this core requirement or 6 hours from Level Two. |
Mathematics Degree Requirements

All candidates for the Bachelor of Science degree in Mathematics, regardless of concentration, must complete the following 28 semester credit hours of required courses (this includes the 3 hours of the Core Curriculum requirement in mathematics):

MAT 1214  Calculus I (The student who is not prepared to begin MAT 1214 must take MAT 1093 Precalculus.)
MAT 1223  Calculus II
MAT 2213  Calculus III
MAT 2233  Linear Algebra
MAT 3013  Foundations of Mathematics
MAT 3213  Foundations of Analysis
MAT 4213  Real Analysis I
STA 3513  Probability and Statistics
STA 3523  Statistical Methods

In addition, a candidate for the Bachelor of Science degree in Mathematics must complete the course requirements for the concentration declared by the candidate.

Mathematics Concentration

All candidates for this concentration must fulfill the Core Curriculum requirements, the mathematics degree requirements, as well as the course requirements necessary for this concentration.

A. 3 or 4 semester credit hours of computer science:

| CS 1073 | Introductory Computer Programming for Scientific Applications |
| CS 1713, 1711 | Introduction to Computer Science and Recitation |
| CS 2073 | Computer Programming with Engineering Applications |
B. 15 semester credit hours of required courses:

- MAT 3243 Calculus for Applications
- MAT 3613 Differential Equations I
- MAT 3633 Numerical Analysis
- MAT 4223 Real Analysis II
- MAT 4233 Modern Abstract Algebra I

C. 6 additional semester credit hours of upper-division courses in mathematics or statistics approved by the student’s advisor.

D. 34 to 35 semester credit hours of electives

**General Mathematical Studies Concentration**

All candidates for this concentration must fulfill the Core Curriculum requirements, the mathematics degree requirements, as well as the course requirements necessary for this concentration.

A. 3 to 4 semester credit hours of computer science:

- CS 1063 Introduction to Computer Programming
- or
- CS 1073 Introductory Computer Programming for Scientific Applications
- or
- CS 1713, 1711 Introduction to Computer Science and Recitation
- or
- CS 2073 Computer Programming with Engineering Applications

B. 15 semester credit hours of mathematics and/or statistics:

1. 9 semester credit hours of mathematics:
   - MAT 3233 Modern Algebra
   - MAT 4113 Computer Mathematical Topics
   - MAT 4263 Geometry

2. 6 approved upper-division semester credit hours in mathematics or statistics

C. 6 semester credit hours of required academic foundations:

- COM 1043 Introduction to Communication
- 3 additional semester credit hours of English literature

D. 34 to 35 semester credit hours of electives

Students seeking teacher certification should use 21 of these hours for the required certification courses. Other students should take an additional 6 semester credit hours of upper-division mathematics or statistics courses approved by the undergraduate advisor for the Department of Mathematics.

Certification requirements for students pursuing the General Mathematical Studies Concentration are different from degree requirements. In addition to specific course requirements, teacher certification in Texas also requires passing scores on the Texas Academic Skills Program (TASP) test and acceptable scores on the state-mandated exit competency test. Complete information may be obtained in the College of Education and Human Development Advising and Certification Center at UTSA.
Minor in Mathematics

All students pursuing the Minor in Mathematics must complete 22 semester credit hours.

A. 16 semester credit hours of required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 1214</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MAT 1223</td>
<td>Calculus II</td>
</tr>
<tr>
<td>MAT 2213</td>
<td>Calculus III</td>
</tr>
<tr>
<td>MAT 2233</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>MAT 3613</td>
<td>Differential Equations I</td>
</tr>
</tbody>
</table>

B. 6 semester credit hours of approved upper-division mathematics electives

To declare a Minor in Mathematics, obtain advice, or seek approval of substitutions for course requirements, students should consult the College of Sciences Undergraduate Advising Center.

COURSE DESCRIPTIONS

MATHEMATICS (MAT)

0103 TASP Review I
(3-0) 3 hours credit.
A course intended for students with minimal mathematical skills who need a comprehensive review before they can successfully complete an algebra course. Topics include the Fundamental Mathematics and Geometry objectives of the Texas Academic Skills Program (TASP), with an introduction to algebra. Intensive review and maintenance of computational skills with integers, fractions, decimals, percents, ratio, and proportions; reading and interpreting information presented in graphs, tables, and charts; solving word problems, elementary algebraic equations, and problems with two- and three-dimensional geometric figures; and inductive and deductive reasoning skills. Course does not count toward any degree at UTSA.

0113 TASP Review II
(3-0) 3 hours credit.
Introductory algebra course that includes the Texas Academic Skills Program (TASP) Algebra and Problem Solving objectives. Operations with algebraic expressions; solving one- and two-variable equations; solving word problems involving one and two variables; graphing numbers and number relationships; solving problems involving quadratic equations. Course does not count toward any degree at UTSA.

1023 College Algebra with Applications
(3-0) 3 hours credit. Prerequisite: Satisfactory performance on a placement examination.
Topics include algebraic expressions, equations, inequalities over the real numbers, relations, functions and graphs, polynomial and rational functions, systems of linear equations and inequalities, complex numbers, and matrices and determinants. A wide range of applications will be included in this course. Students majoring in areas that require MAT 1214, Calculus I are encouraged to take MAT 1073 instead of MAT 1023. [TCCN 1314.] (Formerly MAT 1063. Credit can be earned for only one of the following: MAT 1023, MAT 1063, or MAT 1073.)

1033 Algebra with Calculus for Business
(3-0) 3 hours credit. Prerequisite: Satisfactory performance on a placement examination.
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; matrices; and differentiation and integration. [TCCN: MATH 1325.]
1043 Introduction to Mathematics
(3-0) 3 hours credit. Prerequisite: Satisfactory performance on a placement examination.
This course is designed primarily for the liberal arts major to satisfy the core curriculum mathematics requirement. Topics may include logic, proofs, deductive and inductive reasoning, number theory, fundamentals of statistics, basic statistical graphs, casual connections, financial management, functions, linear graphs and modeling, exponential growth and decay, logarithms, fundamentals of probability, fundamentals of geometry, and basic ideas from trigonometry, calculus, and discrete mathematics. [TCCN: MATH 1332]

1073 Algebra for Scientists and Engineers
(3-0) 3 hours credit. Prerequisite: Satisfactory performance on a placement examination.
This course is designed to prepare the student for MAT 1093 Precalculus and MAT 1214 Calculus. Topics and graphs include algebraic expressions, equations, inequalities over the real numbers, relations, functions, polynomials and rational functions, logarithmic and exponential functions, systems of linear equations and inequalities, matrices and determinants, complex numbers and polynomials, sequences, series, binomial expansion, mathematical induction, permutations, and combinations. (Credit can be earned for only one of the following: MAT 1023, MAT 1063, or MAT 1073.)

1093 Precalculus
(3-0) 3 hours credit. Prerequisite: MAT 1023 or MAT 1073, or the equivalent course or satisfactory performance on a placement examination.
Exponential functions, logarithmic functions, trigonometric functions, complex numbers, DeMoivre’s theorem, and polar coordinates. [TCCN: MATH 2312.]

1143 Essential Elements in Mathematics
(3-0) 3 hours credit. Prerequisite: MAT 1023.
Numeration systems; properties of the systems of whole numbers, integers, rational numbers, and real numbers; problem solving; geometry and measurement; probability and statistics; logic. May not be applied toward a major in mathematics. [TCCN: MATH 1335.] (Credit cannot be earned for both MAT 1143 and MAT 1153).

1153 Essential Elements in Mathematics I
(3-0) 3 hours credit. Prerequisite: MAT 1023 or MAT 1073.
Numeration systems; properties of the systems of whole numbers, integers, rational numbers, and real numbers; problem solving; logic. May not be applied toward a major in mathematics. [TCCN: MATH 1350] (Credit cannot be earned for both MAT 1153 and MAT 1143.)

1163 Essential Elements in Mathematics II
(3-0) 3 hours credit. Prerequisite: MAT 1153.
Algebra, statistics and probability; geometric shapes; measurement; coordinate and transformational geometry. May not be applied toward a major in mathematics. [TCCN: MATH 1351]

1203 Calculus Concepts and Applications
(3-0) 3 hours credit. Prerequisite: MAT 1093.
This course is primarily for students pursuing a degree in Interdisciplinary Studies and/or seeking Pre-K through 8 teacher certification. The course will include the following calculus concepts: functions, limits, derivatives, and integrals. Applications and the use of technology are incorporated throughout the course. This course may not be applied toward a major in mathematics and will not meet the prerequisite for MAT 1223 Calculus II.

1214 Calculus I
(4-0) 4 hours credit. Prerequisite: MAT 1093 or an equivalent course or satisfactory performance on a placement examination.
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. [TCCN: MATH 2413.]
1223 Calculus II
(3-0) 3 hours credit. Prerequisite: MAT 1214.
Methods of integration, inverse trigonometric functions, and applications of the integral. [TCCN: MATH 2314.]

2213 Calculus III
(3-0) 3 hours credit. Prerequisite: MAT 1223.
Special areas of differential and integral calculus; includes Taylor series, power series, convergence tests, vectors, functions of several variables, partial derivatives, and multiple integrals. [TCCN: MATH 2315.]

2233 Linear Algebra
(3-0) 3 hours credit. Prerequisite: MAT 2213 or EGR 2323.
Vector spaces and matrix algebra, matrices and determinants, characteristic values of matrices, and reduction to canonical forms. Emphasis on applications. [TCCN: MATH 2318.]

3013 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. (Formerly MAT 2243. Credit cannot be earned for MAT 3013 and MAT 2243.)

3123 Fundamentals of Geometry
(3-0) 3 hours credit. Prerequisites: MAT 1214 and MAT 3013.
A survey of geometric concepts, including axiomatic development of advanced Euclidean geometry, coordinate geometry, non-Euclidean geometry, three-dimensional geometry, and topology. May not be applied toward a major in mathematics other than the General Mathematical Studies Concentration of the B.S. in Mathematics.

3213 Foundations of Analysis
(3-0) 3 hours credit. Prerequisites: MAT 1214 and MAT 3013.
Axiomatic definition of real numbers, including order properties and completeness; infinite sequences and their convergence; basic notions related to series and their convergence; functions and function limits. Introduction to topology of the real line. Emphasis on theorem proving.

3223 Complex Variables
(3-0) 3 hours credit. Prerequisites: MAT 2213 and MAT 3013. 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. Prerequisites: MAT 1214 and MAT 3013.
Topics will include the development of groups, integral domains, fields, and number systems, including the complex numbers. Divisibility, congruences, primes, perfect numbers, and some other problems of number theory will be considered.

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 and Divergence theorem.

3253 Engineering Analysis
(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 mathematics.
3273  **Applied Mathematics for Sciences and Engineering**  
(3-0) 3 hours credit. Prerequisite: MAT 3253 or MAT 3613.  
Complex analysis, Fourier series, Fourier transforms, harmonic analysis, and partial differential equations. (Formerly MAT 3263. Credit cannot be earned for both MAT 3273 and MAT 3263.)

3613  **Differential Equations I**  
(3-0) 3 hours credit. Prerequisite: Completion of 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, and 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, MAT 3213, and either CS 1073, CS 2073, or CS 1713.  
Solution of linear and nonlinear equations, curve-fitting, and eigenvalue problems.

3653  **Stochastic Calculus**  
(3-0) 3 hours credit. Prerequisite: STA 3513  
Probability, random walk, Brownian motion, stationary and evolutionary processes and stochastic differential equations.

4013  **Graphing Calculator Topics**  
(3-0) 3 hours credit. Prerequisites: MAT 1223 and MAT 3233.  
Mathematical topics from algebra, trigonometry, calculus, modeling, and probability and statistics will be investigated using the graphing calculator. Assessment and evaluation techniques using technology will also be included. May not be applied toward a major in mathematics other than the General Mathematics Studies Concentration of the B.S. in Mathematics.

4113  **Computer Mathematical Topics**  
(3-0) 3 hours credit. Prerequisites: MAT 3233 and either MAT 3123 or MAT 4263.  
Mathematical topics from consumer mathematics, algebra, geometry, number theory, and probability and statistics will be investigated using the computer. Course will also include some instruction in BASIC programming language. May not be applied toward a major in mathematics other than the General Mathematical Studies Concentration of the B.S. in Mathematics.

4123  **History of Mathematics**  
(3-0) 3 hours credit. Prerequisites: MAT 3233 and either MAT 3123 or MAT 4263.  
Selected subjects in mathematics developed through historical perspectives and biographies. May not be applied toward a major in mathematics other than the General Mathematical Studies Concentration of the B.S. in Mathematics.

4213  **Real Analysis I**  
(3-0) 3 hours credit. Prerequisite: MAT 3213.  
Continuous functions, uniform continuity; theory of differentiation; applications of the derivative to properties of functions; antiderivatives; Riemann integral; connection between differentiation and integration.

4223  **Real Analysis II**  
(3-0) 3 hours credit. Prerequisite: MAT 4213.  
Lebesgue integral on the real line; n-dimensional spaces; vectors; calculus of functions of several variables; multidimensional integration.
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4233</td>
<td>Modern Abstract Algebra</td>
<td>(3-0)</td>
<td>MAT 3213</td>
<td>An in-depth study of groups and rings.</td>
</tr>
<tr>
<td>4253</td>
<td>Number Theory</td>
<td>(3-0)</td>
<td>MAT 3213</td>
<td>The theory of primes, congruences, and related subjects.</td>
</tr>
<tr>
<td>4263</td>
<td>Geometry</td>
<td>(3-0)</td>
<td>MAT 3013</td>
<td>Projective, affine, and non-Euclidean geometry.</td>
</tr>
<tr>
<td>4273</td>
<td>Topology</td>
<td>(3-0)</td>
<td>MAT 3213</td>
<td>Set theory, including cardinal and ordinal numbers. Topological properties of the real-line and metric spaces.</td>
</tr>
<tr>
<td>4313</td>
<td>Applied Combinatorics</td>
<td>(3-0)</td>
<td>MAT 1223</td>
<td>Permutations, combinations, arrangements, selections, distributions, generating functions, inclusion-exclusion principle.</td>
</tr>
<tr>
<td>4323</td>
<td>Applied Graph Theory</td>
<td>(3-0)</td>
<td>MAT 1223</td>
<td>Isomorphism, planarity, computer representation of graphs, covering circuits and graph colorings, Euler and Hamiltonian graphs, trees and searching network algorithms (shortest paths, connectivity, traveling salesman, network flow, matching, sorting, etc.).</td>
</tr>
<tr>
<td>4803</td>
<td>Statistical Quality Control</td>
<td>(3-0)</td>
<td>STA 1993 or STA 3513</td>
<td>Statistical methods are introduced in terms of problems that arise in manufacturing and their applications to the control of manufacturing processes. Topics include control charts and acceptance sampling plans. (Same as STA 4803. Credit cannot be earned for both MAT 4803 and STA 4803.)</td>
</tr>
<tr>
<td>4913</td>
<td>Independent Study</td>
<td>3</td>
<td>Permission in writing (form available) of the instructor, the student’s advisor, the Department Chair 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 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.</td>
<td></td>
</tr>
<tr>
<td>4953</td>
<td>Special Studies in Mathematics</td>
<td>(3-0)</td>
<td>Consent of instructor.</td>
<td>An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. May be repeated for credit when the topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.</td>
</tr>
<tr>
<td>4993</td>
<td>Honors Research</td>
<td>3</td>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>
DEPARTMENT OF PHYSICS AND ASTRONOMY

The degree programs offered by the Department of Physics and Astronomy reflect its policy of offering the opportunity for a comprehensive education of the highest quality, individualized to the needs and interests of the students. Completion of a Bachelor’s degree in Physics allows students entry into one of the highly specialized areas in science and technology, and ability to apply for positions in industry and government, as well as entry into professional and graduate schools.

Bachelor of Science Degree in Physics

The Bachelor of Science degree in Physics provides opportunities for preparation for careers in industry and governmental agencies and for graduate study in physics or related fields.

The minimum number of semester credit hours required for this degree, including the Core Curriculum requirements, is 124.

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Science degree in Physics must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both major requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rhetoric</strong> (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement: ENG 1013 Freshman Composition ENG 1023 Discourse across the Disciplines</td>
</tr>
<tr>
<td><strong>Domain I: Mathematics and Science</strong></td>
<td><strong>Mathematics</strong> (3 semester credit hours) MAT 1214 Calculus I</td>
</tr>
<tr>
<td></td>
<td><strong>Science</strong> (6 semester credit hours) Any 6 semester credit hours from the following list will satisfy this core requirement: CHE 1103 General Chemistry I CHE 1303 General Chemistry II PHY 1904, 1911 Technical Physics I and Laboratory PHY 1924, 1931 Technical Physics II and Laboratory</td>
</tr>
</tbody>
</table>
| **Domain II: Society and Culture** | **United States History and Diversity** (6 semester credit hours) Any six hours listed under this section in the list of core courses will satisfy this core requirement. **Political Studies** (6 semester credit hours) POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement. **Social and Behavioral Sciences** (3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement. **Economics** (3 semester credit hours) Any three hours listed under this section in the list of core courses will satisfy this core requirement.
Degree Requirements

A. 55 semester credit hours:

1. 43 semester credit hours of required courses:

   PHY 1904, 1911  Technical Physics I and Laboratory
   PHY 1924, 1931  Technical Physics II and Laboratory
   PHY 3103  Modern Physics
   PHY 3203  Classical Mechanics I
   PHY 3293  Thermal Physics
   PHY 3343  Advanced Physics Laboratory
   PHY 3423  Electricity and Magnetism
   PHY 3443  Modern Optics
   PHY 3513  Electrodynamics
   PHY 3823  Mathematical Physics I
   PHY 4263  Quantum Mechanics I
   PHY 4423  Quantum Mechanics II
   PHY 4823  Mathematical Physics II

2. 12 additional approved semester credit hours selected from the following (a maximum of 3 hours from either PHY 4911-3 or 4953 may apply to this requirement):

   PHY 3123  Semiconductor Technology
   PHY 3143  Computer Visualization of Physics
   PHY 3313  Solid State Physics
   PHY 3453  Lasers: Theory and Applications
   PHY 3463  Biophotonics
   PHY 4003  Introduction to Astrophysics
   PHY 4013  Relativity: Special and General
   PHY 4033  Cosmology
   PHY 4133  Numerical Methods for Physicists
   PHY 4203  Classical Mechanics II
   PHY 4911-3  Independent Study
   PHY 4953  Special Studies in Physics
   PHY 4993  Honors Research

B. 36 semester credit hours required in the College of Sciences:

1. 27 semester credit hours of required courses (excluding physics):

   CHE 1103  General Chemistry I
   CHE 1303  General Chemistry II
   CHE 1312  General Chemistry II Laboratory
Bachelor of Arts Degree in Physics

The Bachelor of Arts degree in Physics provides opportunities for careers in several professional fields. It is not recommended for students planning to pursue graduate studies in physics or related fields.

The minimum number of semester credit hours required for this degree, including the Core Curriculum requirements, is 121.

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

**Core Curriculum requirements:** Students seeking the Bachelor of Arts degree in Physics must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| **Rhetoric** (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
| **Domain I: Mathematics and Science** | **Mathematics** (3 semester credit hours)  
MAT 1214 Calculus I  
**Science** (6 semester credit hours)  
Any 6 semester credit hours from the below list will satisfy this core requirement:  
CHE 1103 General Chemistry I  
CHE 1303 General Chemistry II  
PHY 1904, 1911 Technical Physics I and Laboratory  
PHY 1924, 1931 Technical Physics II and Laboratory |
Degree Requirements

A. 31 semester credit hours:

1. 28 semester credit hours of required courses:

   PHY 1904, 1911 Technical Physics I and Laboratory
   PHY 1924, 1931 Technical Physics II and Laboratory
   PHY 3103 Modern Physics
   PHY 3203 Classical Mechanics I
   PHY 3293 Thermal Physics
   PHY 3343 Advanced Physics Laboratory
   PHY 3423 Electricity and Magnetism
   PHY 3823 Mathematical Physics I

2. 3 additional semester credit hours selected from the following:

   PHY 3143 Computer Visualization of Physics
   PHY 3313 Solid State Physics
   PHY 3443 Modern Optics
   PHY 4003 Introduction to Astrophysics
   PHY 4013 Relativity: Special and General
   PHY 4033 Cosmology
   PHY 4133 Numerical Methods for Physicists
   PHY 4263 Quantum Mechanics I

B. 57 semester credit hours required in the College of Sciences:

1. 21 semester credit hours of required courses (excluding physics):

   CHE 1103 General Chemistry I
   CHE 1303 General Chemistry II
   CHE 1312 General Chemistry II Laboratory

Domain II: Society and Culture

United States History and Diversity (6 semester credit hours)
   Any six hours listed under this section in the list of core courses will satisfy this core requirement.

Political Studies (6 semester credit hours)
   POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.

Social and Behavioral Sciences (3 semester credit hours)
   Any three hours listed under this section in the list of core courses will satisfy this core requirement.

Economics (3 semester credit hours)
   Any three hours listed under this section in the list of core courses will satisfy this core requirement.

Domain III: Literature and the Arts

Literature (3 semester credit hours)
   Any three hours listed under this section in the list of core courses will satisfy this core requirement.

The Arts (3 semester credit hours)
   Any three hours listed under this section in the list of core courses will satisfy this core requirement.

Domain IV: Interdisciplinary Studies

(3 semester credit hours)
   Any three hours listed under this section in the list of core courses will satisfy this core requirement.
Minor in Physics

The Department of Physics and Astronomy also offers a Minor in Physics which serves to increase the value of the student’s major concentration. All students pursuing the Minor in Physics must complete 22 semester credit hours.

A. 19 semester credit hours of required courses:

- PHY 1904, 1911 Technical Physics I and Laboratory
- PHY 1924, 1931 Technical Physics II and Laboratory
- PHY 3103 Modern Physics
- PHY 3203 Classical Mechanics I
- PHY 3423 Electricity and Magnetism

B. 3 semester credit hours selected from the following:

- PHY 3143 Computer Visualization of Physics
- PHY 3163 Theoretical Physics
- PHY 3293 Thermal Physics
- PHY 3313 Solid State Physics
- PHY 3443 Modern Optics
- PHY 3823 Mathematical Physics I
- PHY 4133 Numerical Methods for Physicists
- PHY 4263 Quantum Mechanics I

To declare a Minor in Physics, obtain advice, or seek approval of substitutions for course requirements, students should consult the College of Sciences Undergraduate Advising Center.

COURSE DESCRIPTIONS

PHYSICS (PHY)

1013 Universes
(3-0) 3 hours credit. Prerequisite: MAT 1023 or consent of instructor.
This course is an introduction to contemporary physics and cosmology. The goal is to study some of the profound discoveries in fundamental physics made during the 20th century, and how they have shaped our modern conception of the universe, and of our place in it. Topics discussed include Einstein’s theories of special and general relativity, quantum physics, modern cosmology (including the very early universe), and the standard model of elementary particles and forces. May not be applied toward the B.S. in Physics without prior written approval of the department. May apply toward the Level II Core Curriculum requirement in science. (Formerly AST 1003. Credit cannot be earned for both PHY 1013 and AST 1003.) [TCCN: PHYS 1310.]

1014 Conceptual Physics and Civilization
(3-1) 4 hours credit. Prerequisite: MAT 1023.
Major scientific discoveries since the Renaissance and their impact on the development of culture. May not be applied toward a B.S. or B.A. in Physics.
1113 Preparation for Physics
(3-0) 3 hours credit. Prerequisite: MAT 1023 or consent of instructor.
This course is for students who have not had high school physics and/or need preparation for PHY 1603 or PHY 1904. It is designed to strengthen math-based problem-solving skills. Topics discussed include algebra and trigonometry in physics, one- and two-dimensional kinematics, forces, energy, and momentum. May not be applied toward a B.S. or B.A. in Physics.

1213 The Fringes of Science
(3-0) 3 hours credit.
This course examines the relationship between science and pseudo-science. It is intended to equip the student with the critical-thinking skills needed to distinguish between solid science and claims often promoted as scientific. Classes are a combination of lectures, readings from the history and philosophy of science, class discussion, field trips, etc. Topics discussed may include astrology, black holes, parapsychology, quantum physics, UFOs, homeopathy and other alternative therapies.

1603 General Physics I
(3-0) 3 hours credit. Prerequisite: MAT 1023 completed with a grade of “C” or better.
Motion, forces, conservation of energy and momentum, fluids, wave motion, and heat. Concurrent enrollment in PHY 1611 recommended. May apply toward the Level II Core Curriculum requirement in science. [TCCN: PHYS 1301.]

1611 General Physics I Laboratory
(1-3) 1 hour credit. Prerequisites: Completion of or concurrent enrollment in PHY 1603; proficiency in DOS, spreadsheets, and word processing.
Laboratory accompanies PHY 1603; uses modern data acquisition and analysis tools to study the classic physics experiments that underlie the concepts discussed in PHY 1603. [TCCN: PHYS 1101.]

1623 General Physics II
(3-0) 3 hours credit. Prerequisites: PHY 1603 completed with a grade of “C” or better.
Electricity, electromagnetism, light, sound, and atomic and nuclear physics. Concurrent enrollment in PHY 1631 recommended. May apply toward the Level II Core Curriculum requirement in science. [TCCN: PHYS 1302.]

1631 General Physics II Laboratory
(1-3) 1 hour credit. Prerequisites: PHY 1611 completed with a grade of “C” or better and completion of or concurrent enrollment in PHY 1623; proficiency in DOS, spreadsheets, and word processing.
Laboratory accompanies PHY 1623; uses modern data acquisition and analysis tools to study the classic physics experiments that underlie the concepts discussed in PHY 1623. [TCCN: PHYS 1102.]

1904 Technical Physics I
(4-0) 4 hours credit. Prerequisites: MAT 1214 completed with a grade of “C” or better and completion of or concurrent enrollment in MAT 1223.
The basic concepts and methods of physics. Mechanics, heat, and fluids. Concurrent enrollment in PHY 1911 and MAT 1223 recommended. May apply toward the Level II Core Curriculum requirement in science. [TCCN: PHYS 2425.]

1911 Technical Physics I Laboratory
(1-3) 1 hour credit. Prerequisites: Completion of with a grade of “C” or better or concurrent enrollment in PHY 1904; proficiency in DOS, spreadsheets, and word processing.
Laboratory to accompany PHY 1904: uses modern data acquisition and analysis tools to study the classic physics experiments that underlie the concepts discussed in PHY 1904. [TCCN: PHYS 2125.]

1924 Technical Physics II
(4-0) 4 hours credit. Prerequisites: PHY 1904 and MAT 1223 completed with a grade of “C” or better.
Electricity and magnetism, wave phenomena, and elements of modern physics. Concurrent enrollment in PHY 1931 is recommended. May apply toward the Level II Core Curriculum requirement in science. [TCCN: PHYS 2426.]
1931  Technical Physics II Laboratory
(1-3) 1 hour credit. Prerequisites: PHY 1911 completed with a grade of “C” or better and completion of or concurrent enrollment in PHY 1924; proficiency in DOS, spreadsheets, and word processing. Laboratory to accompany PHY 1924. [TCCN: PHYS 2126.]

2004  Understanding Physics
(3-3) 4 hours credit. Prerequisite: Completion of Core Curriculum requirements in science. Study of major concepts, principles, and theories in the fields of physics and ways of scientific thinking that contribute to empirical and theoretical inquiries. Study of the fundamental laws that govern the universe, including the worlds of mechanics, thermodynamics, electromagnetism, and quantum theory, and how they relate to physics. Topics include but are not limited to fundamental forces; energy and how it is conserved and transformed; optics; matter; atomic structure; and molecular interactions. Includes a laboratory. May not be applied to a major in physics. May apply toward the Level I Core Curriculum requirement in science. [TCCN: PHYS 1410.]

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, spectra, the atomic nucleus, nuclear reactions, and an introduction to elementary particles.

3123  Semiconductor Technology
(3-0) 3 hours credit. Prerequisites: PHY 1924 and completion of or concurrent enrollment in PHY 3103. The course will encompass the theoretical and practical aspects of semiconductor technology currently utilized in industry. Topics to be included are: solid state devices, integrated circuits, microprocessor technology, and all stages of manufacturing. Basic principles involving oxidation, photolithography, etching, doping, deposition, and metalization will be covered. Crystal growth and major steps of wafer preparation will also be discussed.

3133  Computers in the Physics Laboratory
(3-0) 3 hours credit. Prerequisites: PHY 1924, PHY 1931, and PHY 3103. Topics covered include i80x86 assembly language programming, the FORTH programming environment, construction of customized computer interfaces to equipment, writing DOS/Windows device drivers for scientific instrumentation, and computer-controlled data acquisition and analysis.

3143  Computer Visualization of Physics
(3-0) 3 hours credit. Prerequisite: PHY 3103. Simulations of physical processes from classical and quantum mechanics, electrodynamics, and solid state physics. May be applied toward a B.S. in Physics with approval of the physics advisor.

3163  Theoretical Physics
(3-0) 3 hours credit. Prerequisites: PHY 1924 and MAT 2213. Methods of theoretical physics applied to problems in electromagnetism and quantum and statistical physics, with an emphasis on physical formulation and interpretation.

3203  Classical Mechanics I
(3-0) 3 hours credit. Prerequisite: PHY 1924, concurrent enrollment in PHY 3823, or consent of instructor. Kinematics, the Newtonian formulation and the Lagrangian formulation, various applications including gravitation and planetary motion, and rigid body motion.

3233  Environmental Physics
(3-0) 3 hours credit. Prerequisite: PHY 1623 or PHY 1924. The essentials of environmental physics: global climate, energy for human use, pollutants, noise, environmental spectroscopy, and LIDAR.
3293 **Thermal Physics**  
(3-0) 3 hours credit. Prerequisites: PHY 1924, PHY 3103, and MAT 2213.  
Fundamentals of thermodynamics: entropy, free energy, phase transitions, and thermodynamic potentials; equilibrium  
Maxwell-Boltzmann, Bose-Einstein, and Fermi-Dirac distribution functions; derivation of macroscopic equilibrium  
thermodynamics from statistical mechanics.

3313 **Solid State Physics**  
(3-0) 3 hours credit. Prerequisite: PHY 3103.  
Crystalline structures, phonons, energy bands, semiconductor crystals, and devices.

3343 **Advanced Physics Laboratory**  
(0-6) 3 hours credit. Prerequisites: PHY 1924 and PHY 1931.  
Laboratory experience in the areas of optics, modern physics, and solid state and surface physics. (Formerly PHY 3346. Credit cannot be earned for both PHY 3343 and PHY 3346.)

3423 **Electricity and Magnetism**  
(3-0) 3 hours credit. Prerequisites: PHY 1924 and PHY 3823.  
Vector calculus, electrostatics, magnetostatics, Faraday’s Law, and solution to Laplace’s equation.

3433 **Introduction to the Theory of Solid State Electronics**  
(3-0) 3 hours credit. Prerequisites: PHY 3103 and 3313, or consent of instructor.  
Principles of intrinsic and extrinsic semiconductors. The theory of solid state devices.

3443 **Modern Optics**  
(3-0) 3 hours credit. Prerequisites: PHY 3423 and completion of or concurrent enrollment in PHY 3433.  
Reflection, refraction, absorption, polarization, and diffraction of light. Filters, lasers, nonlinear properties, and  
Fourier optics.

3453 **Lasers: Theory and Applications**  
(3-0) 3 hours credit. Prerequisite: PHY 3103.  
Basic principles and designs of lasers: Einstein A and B coefficients; semiclassical laser theory; the phase-coherent  
nature of the stimulated emission process; and laser efficiency. Various applications of lasers, such as laser-induced  
fluorescence, light wave communications, holography, surgery, and laser fusion.

3463 **Biophotonics**  
(3-0) 3 hours credit. Prerequisite: PHY 3443 or consent of instructor.  
Basic concepts of optical radiation interacting with biological materials will be covered. Discussion will be made as  
to how the unique properties of photons are exploited to understand the biological structure and its function. Photon  
asorption and emission in biological materials will be considered to explain their applications, including optical  
imaging as a noninvasive diagnosis tool, photodynamic therapy (PDT), etc.

3513 **Electrodynamics**  
(3-0) 3 hours credit. Prerequisites: PHY 3423 and PHY 3823.  
Maxwell’s equations, electromagnetic waves, wave guides, radiation from accelerated charges.

3823 **Mathematical Physics I**  
(3-0) 3 hours credit. Prerequisites: MAT 2213 and PHY 1924 or consent of instructor.  
Vector analysis, ordinary differential equations, linear algebra, and selected application to problems in mechanics and  
electromagnetic theory.
4003 Introduction to Astrophysics
(3-0) 3 hours credit. Prerequisites: MAT 1223 and PHY 1924 or consent of instructor.
A survey of the fundamentals of modern astrophysics and gravitation including observed properties of stars (normal, multiple, variable, and peculiar). Stellar and nonstellar radiation laws, stellar and planetary atmospheres and interiors, high-energy astrophysics, collapsed objects (neutron stars and black holes), structure and inventory of normal (Milky Way) and active galaxies, quasars, and an introduction to cosmology.

4013 Relativity: Special and General
(3-0) 3 hours credit. Prerequisites: PHY 3203 and PHY 3823.
Special relativity: Lorentz transformations, four-vectors, geometry of flat space-time, relativistic dynamics. General relativity: Principle of equivalence, introduction to tensor calculus, Einstein's field equations, Schwarzschild’s solution, black holes. Introduction to cosmology.

4033 Cosmology
(3-0) 3 hours credit. Prerequisites: PHY 3103 and PHY 3823 or consent of instructor.
Large-scale structure, expansion and age of the universe. Non-Euclidean spaces, big bang cosmology, baryogenesis, nucleosynthesis, cosmic microwave background radiation. Particle physics and inflationary cosmology.

4133 Numerical Methods for Physicists
(3-0) 3 hours credit. Prerequisites: PHY 1924 and MAT 3613.
Numerical simulation of constrained and unconstrained rigid-body systems that are modeled according to physical laws; numerical solution to stiff systems of differential equations; use of automatic differentiation to compute Jacobian matrices associated with complex stiff systems.

4203 Classical Mechanics II
(3-0) 3 hours credit. Prerequisite: PHY 3203.
Advanced methods in mechanics; Lagrangian and Hamiltonian formulations. Nonlinear dynamics, chaos, strange attractors, and fractals.

4263 Quantum Mechanics I
(3-0) 3 hours credit. Prerequisites: PHY 3203 and PHY 3423.
The Schrödinger 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.

4453 Physics Demonstrations
(3-0) 3 hours Prerequisites: PHY 1603 and PHY 1623 or PHY 1904 and PHY 1924.
Introduction to teaching materials and laboratory demonstrations illustrating principles of classical and modern physics, with emphasis on inexpensive techniques and direct experience. May not be counted toward a B.S. or B.A. in Physics.

4463 The Invention Game
(3-0) 3 hours credit. Prerequisites: PHY 1603 and 1623, PHY 1904 and 1924, or consent of instructor.
The entrepreneurial process usually is coupled to innovation, and in today’s technological business world, innovation usually involves some form of applied physics. This course begins with the invention process itself and the physics behind some of the most famous inventions. It proceeds to look at the research and developmental physics that typically follows a new product concept. The course then examines the challenges that face the entrepreneur in the technical marketing of the new product, in which the physics must be conveyed to the consumer.
4553 Health Physics
(3-0) 3 hours credit. Prerequisite: PHY 1924 or the equivalent.

4823 Mathematical Physics II
(3-0) 3 hours credit. Prerequisite: PHY 3823.
Partial differential equations of physics, special functions, introduction to complex analysis, group theory. Applications include topics in classical and quantum mechanics, electrostatics and electrodynamics.

4911-3 Independent Study
1 to 3 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student’s advisor, the Department Chair 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 semester credit hours, regardless of discipline, will apply to a bachelor’s degree in physics.

4933,6 Internship in Physics
3 or 6 hours credit. Prerequisites: Senior standing and consent of internship coordinator.
This course offers supervised work experience relevant to physics within selected organizations and agencies. Internships should be relevant to previous coursework. A maximum of 6 semester credit hours may be earned through Internship in Physics.

4953 Special Studies in Physics
(3-0) 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 may be repeated for credit when the topics vary, but not more than 6 semester credit hours, regardless of discipline, will apply to a bachelor’s degree.

4993 Honors Research
3 hours credit. Prerequisites: 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.

COURSE DESCRIPTIONS
ASTRONOMY

ASTRONOMY

1013 Introduction to Astronomy
(3-0) 3 hours credit. Prerequisite: MAT 1023
A descriptive course including the development of astronomy, its methods, and the motions, laws, and evolution of the solar system. Topics include 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. May apply toward the Level II Core Curriculum requirement in science. [TCCN: PHYS 1311.]

1031 Introduction to Astronomy Laboratory
(1-2) 1 hour credit. Prerequisite: AST 1013, or concurrent enrollment in AST 1013, or consent of instructor.
Exercises in the use of the telescope and certain other astronomical instruments, including simple observations, measurement, and photography. [TCCN: PHYS 1111.]
1033  Exploration of the Solar System
(3-0) 3 hours credit, Prerequisite: MAT 1023.
A descriptive course of modern studies of the solar system, including a survey of the properties of the planets and smaller bodies (asteroids and comets) and current theories of the origin of planetary systems. Topics include results from the latest satellite, robotic, and human exploration of space, origin of life in the solar system, existence of other planetary system, possibilities of space colonization, and the search for extraterrestrial life (techniques and possibilities of communication with other intelligences). May apply toward the Level II Core Curriculum requirement in science. [TCCN: PHYS 1312.]
Photo – Honors College
HONORS COLLEGE

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HONORS COLLEGE

The mission of the Honors College is to provide enhanced educational opportunities for selected, motivated, enthusiastic, diverse, and inquisitive students and to foster the pursuit of excellence in undergraduate higher education. The underlying philosophy of the program is that well-educated individuals should understand broad, interdisciplinary perspectives while demonstrating expertise in their chosen field. The Honors College is open to students from all academic disciplines. Members of the Honors College pursue a rigorous academic program which satisfies all requirements of their academic departments and colleges and goes beyond those requirements to provide the basis for outstanding achievement and appropriate recognition for that achievement. The Honors College offers small classes with greater opportunities for student participation, increased student-faculty contact, greater individual attention, lively discussions of important issues, special interdisciplinary seminars, community service opportunities, and supervised research experiences, all designed to challenge talented students.

Throughout a student's program of study, the Honors College's emphasis is on breadth of academic experience. In the junior and senior year, Honors students usually become more focused in a particular academic discipline. Upper-division Honors work typically culminates in a senior honors thesis or senior honors project under the direction of a faculty member from the student’s major department.

Participation in the Honors College supplements, but does not replace, work in a major field. Credits earned in Honors College courses may be used to satisfy Core curriculum requirements or specific degree requirements. Honors College and departmental advisors assist in assuring that students meet all requirements of each student's major curriculum.

ADMISSION AND RETENTION

Entering Freshmen

Entering freshmen with a minimum SAT of 1100 or ACT of 26 or class rank in the top 10% are invited to apply for admission to the college.

Continuing or Transfer Students

Continuing students and transfer students who have completed at least 12 hours of college course work and have attained at least a 3.30 grade point average (GPA) are also invited to apply for admission.

Good Standing

Following the initial semester in the college, an honors student is considered to be in good standing if he or she maintains a minimum overall or UTSA GPA of 3.25 and successfully completes a minimum of one honors course per academic year. These courses may include honors sections of departmental courses, courses offered through the college (HON), and credit earned through honors contracts. A student not in good standing for two consecutive semesters will be dropped from the college. Students whose GPA falls below 3.25 but remains above 3.00 may petition to remain in the Honors College as a probationary member. Only students in good standing qualify for Honors graduation.

Readmission

Students who have been dropped from the college may apply for readmission if:

- They have attained a minimum overall or UTSA GPA of 3.25; and
- They are currently enrolled in an honors course or register for an honors course at the time of request.

Dual College Membership

All Honors College students are also members of a degree-granting college. Admission to the Honors College is independent of admission to any other academic unit.
FACILITIES AND SERVICES

The UTSA Honors College provides the following opportunities to members of the college:

Counseling and Priority Registration. The honors staff provides academic counseling for all honors students. Honors College students are given priority registration if they preregister for the following semester through the Honors College and are enrolling in a qualifying course.

Honors Scholarships. The Honors College, in conjunction with the UTSA Scholarship Office, annually awards numerous Honors scholarships. Most Honors scholarships are renewable for up to three years for students who maintain the requisite 3.25 GPA and complete an Honors course each semester. More information on scholarships is available in the Office of the Dean of the Honors College.

Honors Undergraduate Research Programs. The Honors Undergraduate Research Program assists students in finding research assistantships in their academic disciplines. In addition, the UTSA Undergraduate Fellows Program provides students working on an Honors thesis with financial assistance for research projects.

Honors Study Abroad. The Honors Study Abroad Program works with the International Programs Office to offer opportunities for Honors students to acquire new knowledge and understanding of the people, events, movement, ideas, and objects of cultures other than their own. Scholarships are available through the International Education Fund.

Honors Internships. Honors students are encouraged to work in their fields prior to graduation. Internships may be assigned locally, nationally, and internationally. Students may earn credit for Honors internship experiences.

Undergraduate and Graduate Fellowships. The Honors College coordinates on-campus efforts to assist graduating students interested in applying for graduate awards such as Rhodes Scholarships, Marshall Scholarships, Mellon Fellowships for the Humanities, NSF Fellowships, and Gates Cambridge Scholarships. Additionally, the Honors College staff identifies and assists students interested in undergraduate awards such as the Harry S. Truman Scholarships and Goldwater Scholarships.

Participation in Honors Councils. The UTSA Honors College is an institutional member of the National Collegiate Honors Council (NCHC), the Great Plains Honors Council (GPHC), and the Council of Honors Administrators in Texas (CHAT). These organizations support honors education in the U.S. and address issues that face higher education and honors programs across the country. Honors students are encouraged to participate in these organizations and are, thus, able to meet and interact with honors students from across the region and nation.

HONORS COLLEGE REQUIREMENTS

Tier 1 Honors

Students who enter the Honors College as freshmen are eligible to earn the distinction of graduation with Tier 1 Honors. Students qualify for the distinction of graduating with Tier 1 Honors, if they: (1) complete 21 hours of honors courses, including IDS 2203, IDS 2213, or CSH 1213 and one Honors Seminar (courses numbered HON 3223 through HON 3253); and (2) attain a cumulative or UTSA grade point average of 3.25 or higher. A maximum of 9 hours of honors contract work may be applied to the 21 hours of honors course work.

Tier 2 Honors

All members of the Honors College are eligible to earn the distinction of graduation with Tier 2 Honors. Students qualify for the distinction of graduating with Tier 2 Honors, if they: (1) complete 30 hours of honors courses, including IDS 2203, IDS 2213, or CSH 1213 and two Honors Seminars (courses numbered HON 3223 through HON 3253); (2) attain a cumulative or UTSA grade point average of 3.25 or higher, and (3) complete a senior Honors thesis or senior Honors project. A maximum of 12 hours of honors contract work may be applied to the 30 required hours of honors course work. The Honors thesis or Honors project must be signed by a three-member committee approved by the Advisory Committee on Honors Education. Students who enter the College with 50+ hours and wish to graduate with Tier 2 Honors may petition to waive 6 hours of Honors course work.

International Distinction

Students who qualify for graduation with Tier 1 or Tier 2 Honors may also qualify for graduation with international distinction. Students qualify for graduation with international distinction if they: (1) complete all the requirements for Tier 1 or Tier 2 Honors; and (2) either master a foreign language at the 2023 level or above or participate in a study-abroad experience for at least one spring or fall semester. Students who earn the international distinction designation graduate with “Tier 1 Honors with international distinction” or “Tier 2 Honors with international distinction.”
Graduation with College Honors

Members of the Honors College who complete the requirements for Tier 1 Honors or Tier 2 Honors qualify to graduate from the Honors College. Recognition for graduation from the Honors College includes a notation on the transcript and diploma and mention in the Commencement bulletin.

COURSE DESCRIPTIONS
HONORS
(HON)

2201 Honors Community Service
1 hour credit. Prerequisite: Enrollment in the University Honors College or consent of instructor.
Supervised community service experience relevant to an Honors education. May be repeated for credit but not more than 3 semester credit hours will apply to a bachelor’s degree.

3021 Honors Essay Writing
1 hour credit. Prerequisite: ENG 1013 and ENG 1023 and enrollment in the University Honors College or consent of instructor.
A special Honors course designed to allow students to receive credit for work on writing essays for competitions. Involves substantial rewriting. May be repeated for credit but not more than 3 semester credit hours will apply to a bachelor’s degree.

3201 Advanced Preceptorial
(1-0) 1 hour credit. Prerequisite: Enrollment in the University Honors College or consent of instructor.
A special Honors discussion section designed to accompany upper-division classes. May be repeated for credit when topics vary.

3223 Honors Seminar in Social & Behavioral Sciences
(3-0) 3 hours credit. Prerequisite: Enrollment in the University Honors College or consent of instructor.
Interdisciplinary seminar that explores broad topics and themes in the social and behavioral sciences. May be repeated for credit when topics vary.

3233 Honors Seminar in Arts & Humanities
(3-0) 3 hours credit. Prerequisite: Enrollment in the University Honors College or consent of instructor.
Interdisciplinary seminar that explores broad topics and themes in arts and humanities. May be repeated for credit when topics vary.

3243 Honors Seminar in Business & the Professions
(3-0) 3 hours credit. Prerequisite: Enrollment in the University Honors College or consent of instructor.
Interdisciplinary seminar that explores broad topics and themes in business and the professions. May be repeated for credit when topics vary.

3253 Honors Seminar in the Sciences
(3-0) 3 hours credit. Prerequisite: Enrollment in the University Honors College or consent of instructor.
Interdisciplinary seminar that explores broad topics and themes in the sciences. May be repeated for credit when topics vary.

3501 Honors Thesis Exploration Seminar
(1-0) 1 hour credit. Prerequisite: Enrollment in the University Honors College or consent of instructor.
Course designed to help students develop an understanding of what a thesis project is, what resources are necessary to complete the project, and identify a topic and a faculty thesis advisor. Students are encouraged to take this course in the first semester of their junior year.
4913 Honors Independent Study
3 hours credit. Prerequisite: Enrollment in the University Honors College or consent of instructor.
Independent reading, research, and writing under the direction of a faculty member. Designed as preparation for completion of an Honors Thesis. May be repeated for credit, but not more than 6 hours of independent study, regardless of discipline, will apply to a bachelor's degree.

4941 Honors Leadership
1 hour credit. Prerequisite: Enrollment in the University Honors College or consent of instructor.
Supervised leadership experience relevant to an Honors education. Usually involves planning and designing experiences for new Honors students.

4953 Honors Internship
3 hours credit. Prerequisite: Enrollment in the University Honors College or consent of instructor.
Supervised service or leadership experience relevant to an Honors education. A maximum of 6 semester credit hours may be earned through Honors Internship.

4993 Honors Thesis
3 hours credit. Prerequisite: Enrollment in the University Honors College or consent of instructor.
Supervised research and preparation of an Honors Thesis for the purpose of earning University Honors. May be repeated once for credit.
Photo – School of Architecture
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## SCHOOL OF ARCHITECTURE

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<td>B.S. in Interior Design</td>
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</table>
SCHOOL OF ARCHITECTURE

Bachelor of Science Degree in Architecture

The Bachelor of Science (B.S.) in Architecture is a four-year pre-professional degree. The minimum number of semester credit hours required for the degree, including Core Curriculum requirements, is 132. Students are advised to complete the B. S. in Architecture degree coursework in the order indicated within the “Recommended Curriculum” issued by the School of Architecture for their catalog year.

The Bachelor of Science (B.S.) in Architecture is a program which prepares students for the continuation of studies in a professional graduate program, a Master of Architecture (M. Arch.). Completion of the B. S. in Architecture degree allows the graduate to pursue limited architectural practice but does not, in itself, fully prepare the graduate for architectural licensure. Students in the B.S. in Architecture program are advised that certification for architectural registration and professional practice by the National Council of Architectural Registration Boards (NCARB) requires, in virtually all cases, an accredited professional degree and broad architectural education such as that provided by the Masters in Architecture Program (M. Arch) at UTSA.

Transfer Students: All transfer students are required to submit a bound portfolio (maximum size 11 inches by 17 inches) to the School of Architecture as soon as admittance to the University is approved. Portfolios must be received at the School of Architecture prior to the second week in March for fall semester admissions; and prior to the second week in August for spring semester admissions. The portfolio must clearly demonstrate creative and communicative skills in written and graphic form. A complete transcript of all professional courses accompanied by the catalog descriptions from the originating institutions must be included. Do not send slides or original work. A postage-paid, self-addressed return envelope must be included for return of the work to the candidate. The portfolio will be reviewed by a faculty committee to determine the student’s placement within the curricular sequence.

Portfolio Review: All students in the B. S. in Architecture program are required to complete a portfolio review prior to their entrance into the third year of architectural studies. Without a portfolio submission students will not be allowed to take ANY 3000 level or above courses. Therefore all students are required to submit a bound portfolio (maximum size 11 inches by 17 inches) prior to the second week in March. The portfolio must clearly demonstrate creative and communicative skills in written and graphic form. A Portfolio Review Committee composed of faculty in the School of Architecture will evaluate the portfolio to determine the level of advancement.

Student Work: The School of Architecture reserves the right to retain, exhibit, and reproduce work submitted by students. Work submitted for grading is the property of the School and remains such until it is returned to the student.

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Science degree in Architecture must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
</table>
| Rhetoric (6 semester credit hours) | All students must take the following six hours to meet this core requirement:  
ENG 1013 Freshman Composition  
ENG 1023 Discourse across the Disciplines |
### Degree Requirements

**A. 6 semester credit hours of mathematics and science (may also be used to satisfy Core Curriculum requirements in Domain I):**

- **MAT 1093 Precalculus**
- **PHY 1603 General Physics I**
  or
- **PHY 1904 Technical Physics I**

And one other science course; the following are recommended:
- **ANT 2033 Introduction to Physical Anthropology**
- **ANT 2043 Introduction to Archaeology**
- **AST 1013 Introduction to Astronomy**
- **CHE 1073 Basic Chemistry**
- **CHE 1103 General Chemistry**
- **ES 2013 Introduction to Environmental Systems**
- **GEO 1013 The Third Planet**
- **GEO 1103 Introduction to Earth Systems**
- **GRG 2613 Physical Geography**
- **PHY 1623 General Physics II**
- **PHY 2004 Understanding Physics**

**B. 81 semester credit hours in the major passed with a grade of “C” or better in each course (ARC 1413 and ARC 2413 may also be used to satisfy Core Curriculum requirements):**

<table>
<thead>
<tr>
<th>Domain I: Mathematics and Science</th>
<th>Mathematics (3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MAT 1093 Precalculus</td>
</tr>
<tr>
<td>Science (6 semester credit hours)</td>
<td></td>
</tr>
<tr>
<td>PHY 1603 General Physics I</td>
<td></td>
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<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>PHY 1904 Technical Physics I</td>
<td></td>
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<tr>
<td>And one other science course; the following are recommended:</td>
<td></td>
</tr>
<tr>
<td>ANT 2033 Introduction to Physical Anthropology</td>
<td></td>
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<tr>
<td>ANT 2043 Introduction to Archaeology</td>
<td></td>
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<tr>
<td>AST 1013 Introduction to Astronomy</td>
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<tr>
<td>CHE 1073 Basic Chemistry</td>
<td></td>
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<td>CHE 1103 General Chemistry</td>
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<tr>
<td>ES 2013 Introduction to Environmental Systems</td>
<td></td>
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<tr>
<td>GEO 1013 The Third Planet</td>
<td></td>
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<tr>
<td>GEO 1103 Introduction to Earth Systems</td>
<td></td>
</tr>
<tr>
<td>GRG 2613 Physical Geography</td>
<td></td>
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<tr>
<td>PHY 1623 General Physics II</td>
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<tr>
<td>PHY 2004 Understanding Physics</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain II: Society and Culture</th>
<th>United States History and Diversity (6 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Any six hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td>Political Studies (6 semester credit hours)</td>
<td>POL 1013 plus 3 additional hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain III: Literature and the Arts</th>
<th>Literature (3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
</tbody>
</table>

**Domain IV: Interdisciplinary Studies**

<table>
<thead>
<tr>
<th>(3 semester credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 1413 Architecture and Culture</td>
</tr>
</tbody>
</table>
1. 42 semester credit hours of required lower-division architectural courses:

ARC 1213  Design I
ARC 1223  Design II
ARC 1313  Visual Communication
ARC 1413  Architecture and Culture
ARC 1423  Architecture and Thought
ARC 2116  Design III
ARC 2126  Design IV
ARC 2213  Construction Materials and Concepts
ARC 2223  Structures I
ARC 2413  History of Architecture I
ARC 2423  History of Architecture II
ARC 2513  Introduction to Digital Design Media

2. 39 semester credit hours of required upper-division architectural courses:

ARC 3216  Architecture Studio I
ARC 3226  Architecture Studio II
ARC 3233  Structures II
ARC 3343  Environmental Systems I
ARC 3353  Environmental Systems II
ARC 3613  History of Modern Architecture
ARC 4246  Architecture Systems Studio
ARC 4256  Architecture Topics Studio
ARC 4513  Professional Practice and Ethics

C. 15 semester credit hours of electives

It is strongly recommended that the electives should include 6 semester credit hours of foreign language courses.

COURSE DESCRIPTIONS
ARCHITECTURE
(ARC)

1213  Design I
(1-6) 3 hours credit. Prerequisite: Completion of or concurrent enrollment in ARC 1313.
Introduction to design through a focus on visual literacy and the conceptualization of human environments. Explores the basic design elements of line, form, color, and texture in conjunction with the principles of rhythm, balance, proportion, and scale. Introduction to architectural precedents, architectural ideas, and architectural conventions. (Formerly ARC 1233. Credit cannot be earned for both ARC 1213 and ARC 1233.)

1223  Design II
(1-6) 3 hours credit. Prerequisites: ARC 1213 and ARC 1313.
Design as a broadly synthetic process which stresses development through graphical visualization. Projects focus on the concerns of interior spatial qualities and design. Explores the role of color, light, and spatial experience in the development of human environments. Introduction to building typologies, space planning, critical thought pertaining to the built environment, and continued concern with architectural precedents.

1313  Visual Communication
(1-6) 3 hours credit.
Exploration of means, methods, and materials used by architects and interior designers in the graphic study of material and spatial conditions. Covers orthographic and isometric projection, section, and perspective through analytical, representational, and transformative drawing techniques. Completion of or concurrent enrollment in this course is required in order to take ARC 1213. [TCCN: ARCH 1307.]
1413 **Architecture and Culture**  
(3-0) 3 hours credit.  
Introduces architecture by exploring its sources in human culture and behavioral patterns and traces its evolution to the current state of architectural, interior design and building professions. Examines their relationship to allied professions. [TCCN: ARCH 1305.]

1423 **Architecture and Thought**  
(3-0) 3 hours credit.  
Introduction to the relationship between the built environment and human thought. Examines the structure of thought and the ideas that give shape to built form. Readings are drawn from literature, philosophy, and architectural theories of different cultures and historical periods. [TCCN: ARCH 1311.]

2116 **Design III**  
(2-12) 6 hours credit. Prerequisite: ARC 1223.  
Architectural and Interior Design with a focus on both process and analysis. Projects are located in nonurban contexts with special consideration given to building to site integration, topography, spatial experience, spatial relationships, programming, and overall organizational concepts. (Formerly ARC 2113. Credit cannot be earned for both ARC 2116 and ARC 2113.)

2126 **Design IV**  
(2-12) 6 hours credit. Prerequisites: ARC 2116, and concurrent enrollment in ARC 2513 and ARC 2223 or IDE 3143.  
Architectural and Interior Design with a focus on full design synthesis. Focus on urban projects with consideration given to historical precedents, urban contextual response, architectural theory, and architectural order. Introduction to the role of fire and life safety concerns, building codes, ADA accessibility, and zoning regulations as formative in design. (Formerly ARC 2123. Credit cannot be earned for both ARC 2126 and ARC 2123.)

2213 **Construction Materials and Concepts**  
(3-0) 3 hours credit. Prerequisite: ARC 1223 or enrollment as a major in construction management.  
Concepts and skills fundamental to structure, construction, building enclosure and interior environments. Analysis and selection of materials, components, and assemblies. Introduction to the historical role of materials in architectural and interior design. Completion of or concurrent enrollment in this course is required in order to take ARC 2223. Concurrent enrollment in ARC 2116 is recommended for ARC and IDE majors.

2223 **Structures I**  
(3-0) 3 hours credit. Prerequisites: Completion of or concurrent enrollment in ARC 2126, ARC 2213, MAT 1093, and either PHY 1603 or PHY 1904.  
Introduction to architectural structures and the principles and systems of structural materials. Course considers the spatial, structural and aesthetic qualities possible in the articulation of structure through architectural design.

2233 **Construction Materials and Sustainable Technology**  
(3-0) 3 hours credit. Prerequisite: ARC 2213.  
Continuation of ARC 2213 further considering material selection, assembly, and the sequencing of building construction. Exploration of the techniques and technology of sustainable design, including material selection, process, and theory.

2413 **History of Architecture I**  
(3-0) 3 hours credit.  
Introduction to the history of architecture, urbanism and material culture from prehistory to the 15th century. Explores the varied ways in which architecture reflects and shapes social, religious and political concerns in the western and non-western world. Concurrent enrollment in ARC 2116 is recommended for ARC & IDE majors.

[TCCN: ARCH 1301.]
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2423</td>
<td>History of Architecture II</td>
<td>3-0</td>
<td>Introduction to the history of architecture, urbanism and material culture from the 15th to the 20th century. Explores the varied ways in which architecture reflects and shapes social, religious and political concerns in the western and non-western world. Concurrent enrollment in ARC 2126 is recommended for ARC &amp; IDE majors. [TCCN: ARCH 1302.]</td>
</tr>
<tr>
<td>2433</td>
<td>History of Building Technology</td>
<td>3-0</td>
<td>Survey of the history of building technology to the present time.</td>
</tr>
<tr>
<td>2513</td>
<td>Introduction to Digital Design Media</td>
<td>2-2</td>
<td>Introduction to 2-dimensional image processing, as well as 3-dimensional and 4-dimensional digital design media. Addresses design skills, principles, techniques, procedures, and knowledge of how digital media impacts the design process, profession, and design culture.</td>
</tr>
<tr>
<td>3113</td>
<td>Presentation Graphics</td>
<td>1-6</td>
<td>Principles and techniques of composition for presentation graphics. Exercises in architectural rendering in various media.</td>
</tr>
<tr>
<td>3203</td>
<td>Housing Design and Development</td>
<td>3-0</td>
<td>Evolution of housing design and development with emphasis on site and market analyses, zoning, codes, and infrastructure issues.</td>
</tr>
<tr>
<td>3216</td>
<td>Architecture Studio I</td>
<td>2-12</td>
<td>Architectural design as the application of building technology and materials as key components in the art of architecture. Examines methods for analyzing and developing the tectonics of an architectural assembly and the principles of structure and its material construction. Projects consider the urban fabric as context and site for architectural investigation.</td>
</tr>
<tr>
<td>3226</td>
<td>Architecture Studio II</td>
<td>2-12</td>
<td>Architectural design focused on environmental control systems and their integration into projects that range in scale and scope. Covers programming skills through a consideration of the relationship between human activities and architectural environments. Projects consider both urban and nonurban settings with a focus on critical response to their respective setting.</td>
</tr>
<tr>
<td>3233</td>
<td>Structures II</td>
<td>3-0</td>
<td>Continued introduction to architectural structures which considers the physical principles that govern classical statics and strengths of materials. Graphical and mathematical design of structural systems. Consideration of the role of structural articulation in the creation of built environments. Completion of this course is required in order to take ARC 4246.</td>
</tr>
<tr>
<td>3343</td>
<td>Environmental Systems I</td>
<td>3-0</td>
<td>Environmentally responsive design of buildings and the natural and artificial systems that support them, including heating, ventilation and cooling, water and waste, and solid waste management. (Formerly ARC 3323. Credit cannot be earned for both ARC 3343 and ARC 3323.)</td>
</tr>
</tbody>
</table>
3353 Environmental Systems II
(3-0) 3 hours credit. Prerequisite: ARC 3343.
Light and sound as building form determinants and the natural and artificial systems that support them, including illumination, electrical design, and acoustics. (Formerly ARC 3313. Credit cannot be earned for both ARC 3353 and ARC 3313.)

3613 History of Modern Architecture
(3-0) 3 hours credit.
Study of the social, aesthetic, theoretical, technical, cultural, and professional forces that form, shape, and communicate modern architecture. Completion of ARC 2413 and ARC 2423 is recommended for ARC and IDE majors.

4013 Building Construction Estimating I
(3-0) 3 hours credit. Prerequisites: ARC 2126 or enrollment as a major in construction management; ARC 2213.
Introduction to estimating procedures related to quantity surveying, cost of materials and labor, and life-cycle costs.

4023 Building Construction Estimating II
(3-0) 3 hours credit. Prerequisite ARC 4013.
Continuation of ARC 4013 with emphasis on pricing work, sub-contracting and bidding strategies. Review of major cost-estimating software.

4113 Project Development
(3-0) 3 hours credit. Prerequisite: ARC 3203 for construction management majors or consent of instructor.
The application of building/development practices to architectural and planning projects.

4143 Architecture Topics
(3-0) 3 hours credit. Prerequisite: ARC 2126 or consent of instructor.
A study of current trends and issues in architecture. May be repeated once for credit when topics vary.

4153 Topics in International Architecture
(3-0) 3 hours credit. Prerequisite: ARC 2126 or consent of instructor.
An examination of current international trends and issues in architecture and interior design. May be repeated once for credit when topics vary.

4223 Topics in Design Computing
(2-2) 3 hours credit. Prerequisite: ARC 2513 or consent of instructor.
Theory-based seminar course exploring critical, spatial and philosophical issues relative to the impact of digital technologies within the field of architecture. Involves some usage of 2D and 3D digital media.

4233 Computer Projects in Design
(2-2) 3 hours credit. Prerequisite: ARC 2513 or consent of instructor.
Project-driven lecture/lab course exploring advanced issues associated with 3D modeling, animation, photo-realistic visualization, and computer-aided manufacturing. Considers the role these processes play in architectural design.

4246 Architecture Systems Studio
(2-12) 6 hours credit. Prerequisites: ARC 3226, ARC 3233, and ARC 3353.
Advanced architectural design with a focus on the interrelationship of the systems responsible for the full development of architectural environments. Includes theoretical and design consideration of systems of architectural order including natural, structural, mechanical, movement, enclosure, and assembly at multiple scales. Requires recognition of life safety issues, ADA accessibility, zoning regulations, and a conformance to building codes.
4256  Architecture Topics Studio  
(2-12) 6 hours credit. Prerequisites: ARC 3226, ARC 3233, and ARC 3353 or consent of instructor. 
Topics-based exploration and application of advanced design theory relative to architecture and urban design. 
Covers design philosophy, programming, transformation processes, and design development.

4313  Construction Graphics  
(1-4) 3 hours credit. Prerequisites: ARC 3226 or 3246; ARC 3233 (for architecture majors); ARC 3353. 
A study in the preparation of construction documents and their use in communication of design concepts among 
the designer, owner, contractor, and others. Students will be required to prepare detailed construction documents.

4333  Practicum  
3 hours credit. Prerequisites: ARC 3226; ARC 3246 or enrollment as a major in construction management. Must 
have consent of instructor. 
Offers students majoring in architecture, interior design, and construction management participation in a variety 
of design, development, and construction concerns. Students work under supervision 15 to 20 hours a week in an 
approved internship to gain knowledge of their respective professional fields. (Formerly ARC 3333. Credit 
cannot be earned for both ARC 4333 and ARC 3333.)

4423  History and Theory of Urban Form  
(3-0) 3 hours credit. Prerequisites: ARC 2126, ARC 2413, and ARC 2423. 
Concentrates on the origins of the contemporary city, its current condition, and emerging theories of urban 
design.

4513  Professional Practice and Ethics  
(3-0) 3 hours credit. Prerequisite: ARC 2126. 
A study of the currently applied ethical, legal, and professional criteria for the practice of architecture and allied 
professions. Forms of practice, client relationships, interior design, team leadership, office organization, and 
project management including initiation, acquisition, agreements, and management.

4613  Construction Management I  
(3-0) 3 hours credit. Prerequisite: ARC 2126 or enrollment as a major in construction management. 
The study of the management of the construction process and its integration with allied professions.

4623  Construction Management II  
(3-0) 3 hours credit. Prerequisite ARC 4613. 
Continuation of ARC 4613 with emphasis on scheduling and project delivery methods.

4911,3,6  Independent Study  
1, 3, or 6 hours credit. Prerequisite: Permission in writing (form available) of the instructor, the student’s advisor, 
the Department Chair, and the Dean of the college in which the course is offered. 
Scholarly research under the direction of a faculty member. May be repeated for credit, but not more than 6 
semester credit hours of independent study, regardless of discipline, may apply to a bachelor’s degree.

4953,6  Special Studies in Architecture  
(1-6) 3 hours credit, (2-12) 6 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 may be repeated for credit when the topics vary, but not more than 6 
semester credit hours for ARC 4953 or 12 hours for ARC 4956, regardless of discipline, will apply to a bachelor’s degree.
Bachelor of Science Degree in Interior Design

The Bachelor of Science (B. S.) in Interior Design is a four-year professional degree. The minimum number of semester credit hours required for the degree, including Core Curriculum requirements, is 132. Students are advised to complete the B. S. in Interior Design degree coursework in the order indicated within the “Recommended Curriculum” issued by the School of Architecture for their catalog year.

Transfer Students: All transfer students are required to submit a bound portfolio (maximum size 11 inches by 17 inches) to the School of Architecture as soon as admittance to the University is approved. Portfolios must be received at the School of Architecture prior to the second week in March for fall semester admissions; and prior to the second week in August for spring semester admissions. The portfolio must clearly demonstrate creative and communicative skills in written and graphic form. A complete transcript of all professional courses accompanied by the catalog descriptions from the originating institutions must be included. Do not send slides or original work. A postage-paid, self-addressed return envelope must be included for return of the work to the candidate. The portfolio will be reviewed by a faculty committee to determine the student's placement within the curricular sequence.

Portfolio Review: All students in the B. S. in Interior Design program are required to complete a portfolio review prior to their entrance into the third year of interior design studies. Without a portfolio submission students will not be allowed to take ANY 3000 level or above courses. Therefore all students are required to submit a bound portfolio (maximum size 11 inches by 17 inches) prior to the second week in March. The portfolio must clearly demonstrate creative and communicative skills in written and graphic form. A Portfolio Review Committee composed of faculty in the School of Architecture will evaluate the portfolio to determine the level of advancement.

Student Work: The School of Architecture reserves the right to retain, exhibit, and reproduce work submitted by students. Work submitted for grading is the property of the School and remains such until it is returned to the student.

All candidates seeking this degree must fulfill the Core Curriculum requirements and the degree requirements, which are listed below.

Core Curriculum requirements: Students seeking the Bachelor of Science degree in Interior Design must fulfill University Core Curriculum requirements in the same manner as other students. The courses listed in the table below satisfy both degree requirements and Core Curriculum requirements; however, if these courses are taken to satisfy both requirements, then students will need to take additional courses in order to meet the minimum number of semester credit hours required for this degree. For a complete listing of courses that satisfy the Core Curriculum requirements see pages 9-13 of this catalog.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Courses that Satisfy Core Curriculum and Degree Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhetoric (6 semester credit hours)</td>
<td>All students must take the following six hours to meet this core requirement:</td>
</tr>
<tr>
<td></td>
<td>ENG 1013 Freshman Composition</td>
</tr>
<tr>
<td></td>
<td>ENG 1023 Discourse across the Disciplines</td>
</tr>
<tr>
<td>Domain I: Mathematics and Science</td>
<td>Mathematics (3 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Any three hours listed under this section in the list of core courses will satisfy this core requirement.</td>
</tr>
<tr>
<td></td>
<td>Science (6 semester credit hours)</td>
</tr>
<tr>
<td></td>
<td>Three hours from Level One and three hours from Level Two will satisfy this core requirement.</td>
</tr>
</tbody>
</table>
Degree Requirements

A. 90 semester credit hours in the major passed with a grade of “C” or better in each course (ARC 1413 and ARC 2413 may also be used to satisfy Core Curriculum requirements):

1. 39 semester credit hours of required lower-division architecture and interior design courses:

   ARC 1213 Design I
   ARC 1223 Design II
   ARC 1313 Visual Communication
   ARC 1413 Architecture and Culture
   ARC 2116 Design III
   ARC 2126 Design IV
   ARC 2213 Construction Materials and Concepts
   ARC 2413 History of Architecture I
   ARC 2423 History of Architecture II
   ARC 2513 Introduction to Digital Design Media
   IDE 2143 Interior Materials and Assemblies I

2. 51 semester credit hours of required upper-division architecture and interior design courses:

   ARC 3343 Environmental Systems I
   ARC 3353 Environmental Systems II
   ARC 3613 History of Modern Architecture
   ARC 4233 Computer Projects in Design
   ARC 4513 Professional Practice and Ethics
   IDE 3153 Interior Materials and Assemblies II
   IDE 3213 History of Interiors and Furniture I
   IDE 3223 History of Interiors and Furniture II
   IDE 3236 Interior Design Studio I
   IDE 3246 Interior Design Studio II
B. 6 semester credit hours of electives

It is strongly recommended that the electives should include 6 semester credit hours of foreign language courses.

**COURSE DESCRIPTIONS**

**INTERIOR DESIGN**

**(IDE)**

**2143 Interior Materials and Assemblies I**
(3-0) 3 hours credit. Prerequisite: ARC 2213.
Study of materials and sustainable products used in interior spaces and their specification, installation, maintenance, and performance. (Formerly ARC 3143. Credit cannot be earned for both IDE 2143 and ARC 3143.)

**3013 Color and Light**
(3-0) 3 hours credit. Prerequisite: ARC 2126.
Studies of psychological and physiological effects of color and light in the built environment. Light as a form determinant of interior space. Introduction to artificial illumination design. (Formerly ARC 3013. Credit cannot be earned for both IDE 3013 and ARC 3013.)

**3153 Interior Materials and Assemblies II**
(3-0) 3 hours credit. Prerequisite: IDE 2143.
Continued study of materials used in interior spaces with an emphasis on textiles, furniture systems, and specifications. (Formerly ARC 3153. Credit cannot be earned for both IDE 3153 and ARC 3153.)

**3213 History of Interiors and Furniture I**
(3-0) 3 hours credit. Prerequisites: ARC 2413 and ARC 2423.
Survey of social, aesthetic, technical, cultural, and professional forces that historically have influenced the use of interior space and furniture design in different cultures from prehistory through 1650. (Formerly ARC 3213. Credit cannot be earned for both IDE 3213 and ARC 3213.)

**3223 History of Interiors and Furniture II**
(3-0) 3 hours credit. Prerequisites: ARC 2413, ARC 2423, ARC 3613, and IDE 3213.
Survey of social, aesthetic, technical, cultural, and professional forces that historically have influenced the use of interior space and furniture design in different cultures from 1650 through the present. (Formerly ARC 3223. Credit cannot be earned for both IDE 3223 and ARC 3223.)

**3236 Interior Design Studio I**
(2-12) 6 hours credit. Prerequisites: ARC 2126, ARC 2423, ARC 2513, and IDE 2143.
Interior design as the application of building construction systems and materials as key components in the art of shaping interior volumes. Project research and programming methods are applied and furniture selections are explored and integrated within a spatial context. (Formerly ARC 3236. Credit cannot be earned for both IDE 3236 and ARC 3236.)

**3246 Interior Design Studio II**
(2-12) 6 hours credit. Prerequisite: IDE 3236.
Interior design focused on integrating mechanical, acoustical, and lighting systems through a consideration of the relationship between human activities and various interior environments. (Formerly ARC 3246. Credit cannot be earned for both IDE 3246 and ARC 3246.)
4133  **Interior Design Topics**  
(3-0) 3 hours credit. Prerequisite: ARC 2126 or consent of instructor.  
Study of current trends and issues in interior design. May be repeated once for credit when topics vary.  
(Formerly ARC 4133. Credit cannot be earned for both IDE 4133 and ARC 4133.)

4203  **Interior Design Details and Construction Graphics**  
(3-0) 3 hours credit. Prerequisite: IDE 2143 and IDE 3153.  
Project-driven lecture studio course focusing on design and documentation of interior construction. (Formerly ARC 4203. Credit cannot be earned for both IDE 4203 and ARC 4203.)

4213  **Furniture Design and Construction**  
(1-4) 3 hours credit. Prerequisite: Junior standing.  
Focuses on the essential qualities of the elements of furniture design and construction, emphasizing human factors and the use of materials and connections.

4266  **Interior Design Systems Studio**  
(2-12) 6 hours credit. Prerequisites: ARC 3353, IDE 3153, IDE 3246, and IDE 4203.  
Comprehensive design and documentation to include integration and articulation of building assemblies, life safety issues, environmental, and furniture systems. (Formerly ARC 4266. Credit cannot be earned for both IDE 4266 and ARC 4266.)

4276  **Interior Design Topics Studio**  
(2-12) 6 hours credit. Prerequisites: ARC 3353, IDE 3153, IDE 3246, and IDE 4203 or consent of instructor.  
Topics based exploration and application of advanced design theory relative to interior design. Covers design philosophy, programming, transformation processes, and design development. (Formerly ARC 4276. Credit cannot be earned for both IDE 4276 and ARC 4276.)

4911,3,6  **Independent Study**  
1, 3, or 6 hours credit. Permission in writing (form available) of the instructor, the student’s advisor, the Department Chair, and the Dean of the college in which the course is offered.  
Scholarly research under the direction of the faculty member. May be repeated for credit, but not more than 6 semester credit hours of independent study, regardless of discipline, may apply to a bachelor’s degree.

4953,6  **Special Studies in Interior Design**  
(1-6) 3 hours credit, (2-12) 6 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 may be repeated for credit when topics vary, but not more than 6 semester credit hours for IDE 4953 or 12 hours for IDE 4956, regardless of discipline, will apply to a bachelor’s degree.
CORE CURRICULUM COURSES

COURSE DESCRIPTIONS

CORE

(COR)

1203  Freshman Seminar
(3-0) 3 hours credit.
An organized course focusing on a topic in the social and behavioral sciences. Topics will vary, but may include Society and the Arts, Society and Business, Society and Communication, Society and Culture, Society and Education, Society and Health, Society and the Law, Society and Politics, Society and Science, Society and Self, and Society and Technology. No more than 3 semester credit hours in COR courses may be taken to satisfy the Core Curriculum requirement in Domain IIC.

2213  Engineering and Civilization
(3-0) 3 hours credit.
Technology and engineering as central features of modern world civilization. Topics treated in a historical framework may include the relationship between technology and science; the Industrial Revolution; technology, society, politics, and ethics in the nineteenth and twentieth centuries; and the rise of the engineering profession.
PREPROFESSIONAL COURSES OF STUDY IN LAW, MEDICINE, OR BUSINESS

Students interested in legal, medical, dental, or nursing careers are encouraged to select undergraduate courses of study that comply with the specific program requirements of professional schools. Students planning to apply to graduate professional programs should consult UTSA faculty with experience in and knowledge of those professional fields.

As a general guide, minimum requirements are set forth below. However, satisfactory completion of these minimums does not guarantee admission to any professional school or program. Specific professional schools may have more specialized requirements, and the selection process for admission to professional schools is highly competitive.

Preparation for Law School. Students interested in preparing for and gaining admission to law school should contact the UTSA Institute for Law and Public Affairs or one of UTSA's pre-law faculty advisors. Most law schools do not recommend that pre-law students major in or concentrate on any particular area or discipline, although they do recommend that students acquire and develop certain skills as undergraduates, including strong analytical and writing skills. Most law schools say that a broad, diverse, liberal undergraduate education is preferable to one that is narrowly specialized or vocational. Many schools look for a showing of thorough, dedicated learning in a broad academic field. Student programs of study that approach subjects on a theoretical level, rather than concentrating exclusively on practical aspects, are often considered good preparatory training for law school. It is also advisable, however, for students to take some law-oriented courses at the undergraduate level to assess for themselves, and to demonstrate to law schools, their aptitude for legal studies and potential for success in law school.

To discover what a particular law school recommends, students should review that school’s catalog or website. Students will find a wealth of information on law school admissions and preparation at the Law School Admission council’s website: http://lsac.org and in materials maintained by the UTSA Institute for Law and Public Affairs. The Institute offers a minor in Legal Studies and an intensive Summer Law School Preparation academy that pre-law students may consider. Students who wish to discuss pre-law curriculum or their law schools plans should contact the Institute.

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 a degree program suited to the student’s special abilities and interests. The vast majority of entrants have four years of college with a baccalaureate degree. A few students with outstanding records and a high degree of maturity are admitted to medical or dental school after completing 90 semester credit 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; and 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 before late spring application for admission.

Students are encouraged to consult with the chairperson of the Health Related Professions (HRP) Advisory Committee in the Department of Biology and the College of Sciences Advising Center early in their college career for advisement and information concerning professional school requirements.

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 (outlined in the UTHSCSA Bachelor of Science in Nursing degree plan on pages 377–379 in this catalog) are representative of admission requirements for most other American nursing schools. A minimum of 60 semester credit hours is required, including 6 semester credit hours of college English, 9 hours in behavioral sciences, 12 hours in history and government, 3 hours in statistics, and 18 hours in natural sciences which must include chemistry, anatomy, physiology, microbiology, and nutrition.

Additional information and advisement may be obtained from the chairperson of the Health Related Professions (HRP) Advisory Committee in the Department of Biology or the College of Sciences Advising Center.

3-4 Dental Early Admission Program. This is a joint program between The University of Texas at San Antonio and The University of Texas Health Science Center at San Antonio Dental School. This program offers students with an interest in dentistry the opportunity to receive early conditional acceptance to the dental school and to receive both a Bachelor of Science degree in Biology at UTSA and a Doctor of Dental Surgery degree at UTHSCSA within seven years. A list of the requirements for acceptance into the program and for its completion are available in the Department of Biology or the College of Sciences Advising Center.

Preparation for Physical Therapy and Occupational Therapy Programs. In general, physical and occupational therapy programs are master’s level programs. General admission prerequisites for certain physical and occupational therapy schools are available in the College of Sciences Advising Center.

Preparation for Graduate Study in Business. Nonbusiness majors who are interested in pursuing an M.B.A. are encouraged to use the electives in their degree program to complete the requirements for an outside field of business. Completion of this outside field may offer students the opportunity of gaining direct admission to many M.B.A. programs.
APPENDIX A

UTSA Faculty

COLLEGE OF BUSINESS

DEPARTMENT OF ACCOUNTING

PROFESSORS

Russell F. Briner, B.B.A., Texas Tech University; M.B.A., Texas A&M University; Ph.D., Oklahoma State University
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D. Elaine Sanders, B.B.A., Eastern New Mexico University; M.Acc., Ph.D., University of Oklahoma
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## APPENDIX B

### Texas Common Course Numbering System

UTSA is a participant in the Texas Common Course Numbering (TCCN) System. A standard set of four-character abbreviations for academic disciplines and four-digit course numbers, this system aids in the transfer of lower-division academic courses among colleges and universities in Texas. The first digit of the number represents the academic level of the course (0 for subfreshman, 1 for freshman, and 2 for sophomore); the second represents the semester credit hours value of the course. Most community colleges in Texas have adopted TCCN as their course numbering system; others cross-reference their courses with TCCN.

The table below lists TCCN course designation and their UTSA equivalents. UTSA courses are designated by four-digit numbers following a two- or three-letter abbreviation of the academic discipline. The first digit indicates the level of the course (0 are developmental education courses, 1 and 2 are lower-division). The second and third digits are used within the colleges by each department to distinguish individual courses. The fourth digit indicates the semester-credit-hour value of each course.

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*Core curriculum courses that do not have a Texas Common Course Number (TCCN) have been assigned an “acceptable substitute TCCN.” If a student completes a course bearing this number, it will be accepted as meeting the applicable core curriculum requirement.
Students are encouraged to maximize their experience at UTSA by accessing the credit that can be received through the College Level Examination Program (CLEP) and Advanced Placement (AP) programs. The following tables provide information on minimum scores required in order to receive credit at UTSA. Additional material on both programs is available from UTSA Testing Services (210-458-4125).

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<th>Minimum Score Required for UTSA Credit</th>
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*All credit shown in this table as elective credit is lower division unless otherwise indicated.
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*This examination is the same for both credit granting areas. The score determines which credit is awarded. Credit cannot be used for both IS and CS. Students having earned course credit for IS 3003 cannot earn test credit for the CS elective.

+with “pass” on essay scored by English Department Faculty
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